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Observations
ON
THE BACTERIOLOGY OF CHRONIC NASAL CATARRH AND ITS TREATMENT BY AUTOGENOUS VACCINES.

BY
LEONARD MACKEY, M.D., M.R.C.P.,
PHYSICIAN TO OUT PATIENTS, QUEEN'S HOSPITAL, BIRMINGHAM.

The cases on which this paper is based were of patients suffering from (1) recurrent acute nasal catarrh, (2) chronic nasal catarrh, or (3) chronic post-nasal catarrh.

They do not include (*a*) simple brief nasal catarrhs, (*b*) epidemic nasal catarrhs, influenzal or otherwise, or (*c*) nasal infections associated with polypi, diseases of antrum or sinuses, atrophic rhinitis, or any discoverable surgical lesion, with the exception of some cases of adenoids which will be referred to later.

All the cases were sent to me with a view to vaccine treatment, and the bacteriological examinations were made for that purpose.

On the records kept during the past seven years this paper is based. Nearly every case was examined by a throat surgeon, whose opinion enabled me to exclude local lesions and abnormalities.

Method of Making Cultures.

Having ascertained that the patient has not recently used any antiseptic nasal douche, I gently pass a nasal swab along the floor of the nasal passage till it reaches the back of the nasopharynx, move it about a little, and then withdraw it in such a way that it rubs against the turbinate bone. Having swabbed the other side in the same way, I immediately inoculate two plates of blood agar and place them in the incubator.

A nasal swab is made like a throat swab, but is much smaller and on much finer wire so that it follows any twisting of the nasal passages without hurting the patient.

At first I used a nasal speculum when taking the swabs, but now I only use it when the nostrils are very hairy or sore. A post-nasal swab passed through the mouth and behind the soft palate has proved of no use to me.

It is of the *utmost importance* that the cultures should be put on and incubated *as soon as the swab has been taken*, and if this is impossible the swabs should be kept warm (for example, in the waistcoat breast pocket) till they can be taken to a laboratory. A delay of a few hours may spoil the cultures. It is impossible to place any reliance on a nasal swab sent through the post, for two of the most important germs found in nasal catarrhs—namely, *Pneumococcus* and *B. influenzae*—die quickly if the swab gets cold, while germs of minor importance, such as staphylococci and diphtheroid bacilli, actually multiply in the mucus on the swab and become more abundant as time elapses between the taking of the swab and the making of the cultures. So that in a case where the immediate cultures showed, say—

Pneumococcus	1,000 colonies
Staphylococcus	8 colonies

a similar swab sent through the post and cultured the next morning will grow—

Staphylococcus	1,000 colonies
Pneumococcus	*nil*

This result is utterly fallacious, and if followed by an autogenous staphylococcal vaccine could only bring it into disrepute. If anyone doubt the truth of this apparent paradox, he need but try the experiment a few times to convince himself of its accuracy.

The Bacteriology of Healthy Nasal Passages.

It is essential to know something of the bacteriology of normal nasal passages if we wish to interpret accurately our findings in catarrh.

The nose is not, like the mouth and throat, a breeding place for all sorts of germs. Compared with the pharynx the healthy nasopharynx is wonderfully sterile—at least, that part of it which can be reached by a nasal swab.

Cultures, made in the way described above, have been made by me repeatedly from healthy persons, and they bear little or no resemblance to cultures made from patients with nasal catarrhs.

In catarrh almost invariably a profuse growth is obtained of the causative germ, which is usually *Pneumococcus*, *B. influenzae*, *Micrococcus catarrhalis*, Friedländer's bacillus (*B. mucosus capsulatus*), or a special type of streptococcus.

In health, cultures are sometimes quite sterile, but more often show a few odd colonies of *Staphylococcus albus* and diphtheroid bacilli. Sometimes in healthy persons one gets a profuse growth of these two germs, and for that reason should be very chary of accepting them as causal in cases of catarrh.

Diphtheroids, under the names *B. septus* and *B. coryzae segmentosus*, have been described as causes of catarrh, and even as causes of epidemics. I do not deny that they can become pathogenic, but the more I see of them the less is the importance I attach to them, and for some years I have refused to make vaccines from them alone.

Staphylococcus aureus sometimes appears in cultures from a healthy nose, but more frequently when there are pimples or sores in the passages. It is seldom the sole cause of an ordinary nasal catarrh, and, when associated with a purulent discharge, points rather to definite disease of the antrum or sinuses.

I believe—and I think every one must believe—that healthy persons can carry catarrhal germs in their nasal passages without suffering from catarrh, but I am sure it is a mistake to think that such examples are common, and I have never obtained good cultures of the pneumococcus and influenza bacillus from healthy nasal passages.

On the other hand, it is quite common to find a person with post-nasal catarrh who is unconscious of the fact, though greenish muco-pus can be seen trickling down from his nasopharynx.

The practical point is that such bacteria as may be present in healthy nasal passages should not deceive the investigator in nasal catarrh except in rare instances, provided always that he makes his cultures from fresh swabs.

The following is a short table of the germs found in 558 cases of chronic nasal catarrh during the past seven years. It shows that seven or eight different germs are capable of causing chronic catarrh, and that the pneumococcus is easily first and the influenza bacillus second.

Table showing Micro-organisms found in 558 Cases of Chronic Nasal Catarrh (only good growths on blood-agar are tabulated).

(October, 1912, to July, 1919.)

	Occurred in	Pure cultures in
Pneumococcus	191 cases	... 103 cases
B. influenzae	142 ,,	... 48 ,,
M. catarrhalis	119 ,,	... 49 ,,
Staphylococcus aureus ...	104 ,,	... 56 ,,
Streptococcus (not S. mucosus)	52 ,,	... 18 ,,
Diphtheroid bacillus (B. septus and B. coryzae segmentosus)	46 ,,	... 10 ,,
Streptococcus mucosus ...	41 ,,	... 22 ,,
Friedländer's bacillus (B. mucosus capsulatus) ...	41 ,,	... 14 ,,
Staphylococcus albus	40 ,,	... 26 ,,
M. tetragenus	5 ,,	... 5 ,,
B. proteus	4 ,,	... 0 ,,

351 cases showed pure cultures.
207 cases showed mixed cultures.

The above figures need little comment, but I must again remind the reader that the list does not include (1) cases of a single attack of "cold in the head" or (2) epidemics of nasal catarrh. Obviously figures based on an epidemic in a school or town would be most misleading if applied to common colds in general.

It is also possible that the simple acute nasal catarrh, which clears up rapidly and does not recur, may be due to a germ which occupies a low place on my list. In other words, my figures may show that pneumococcal and influenzal colds are not really the commonest, but only the most difficult to get rid of. More research is needed to clear up these points.

My cases may be divided clinically into three main groups, and in each group the pneumococcus and influenza bacillus predominate over all other germs.

1. *Cases of Frequently Recurring Acute Attacks of Nasal Catarrh, leaving the Patient apparently free from Catarrh between the Attacks.*

These persons are usually carriers. The acute attack gives them a few weeks' protection and respite, after which they develop a fresh attack, the onset of which is often

determined by a chill, a change of weather, a long railway journey, or a visit to a stuffy and crowded entertainment.

If tested in the interval between the attacks they will be found infected. In children such a condition is usually due to adenoids, and clears up after their removal.

2. *Cases of Chronic Nasal or Post-nasal Catarrh in which the Patient's Chief Complaint is the Discharge itself.*

The catarrh either necessitates the frequent use of a handkerchief or worries the patient by the constant discharge at the back of the nose. Sometimes such persons get acute attacks also.

In such patients evidence is frequently discovered of ill health, such as lack of energy, indigestion and lack of appetite, shortness of breath on exertion, and hearts which are easily strained by exercise, but the chief trouble, from the patient's point of view, is the incessant nasal discharge. In children such cases are usually due to adenoids, and the removal of the adenoids cures the child.

3. *Cases in which there is Post-nasal Catarrh, but the Patient is not aware of its Existence, and complains only of its Consequences.*

Such consequences are:

(*a*) Chronic or recurrent bronchitis, sometimes associated with asthma.
(*b*) General ill health and incapacity for ordinary work.
(*c*) Chronic gastric catarrh and disorders of digestion, due presumably to the swallowing of pus and germs.
(*d*) Signs of heart strain, presumably from toxic action on the myocardium.
(*e*) Neurasthenia.
(*f*) In rare cases pleurisy, pains in joints, muscles and fascia.
(*g*) Otherwise-unexplained spells of mild pyrexia.
(*h*) Such infections may act as a contributory cause in more serious diseases of doubtful origin, such as nephritis and arthritis.
(*i*) In children sharp attacks of pyrexia with enlargement of the cervical glands may be the only symptom of chronic post-nasal infection, and earache and otitis media may arise from the same cause. In children such infections are usually associated with adenoids, and the germs disappear after the adenoids have been removed.
(*j*) Two adults and three children were sent to me because they had had several attacks of lobar pneumonia within a few years; all showed a pure culture of pneumococcus from nasal swabs.

Now I do not wish the reader to run away with the idea that I believe neurasthenia and gastritis is often due to nasal infections, but I do believe that chronic nasal infections are capable of causing those and many other diseases, and that a routine investigation of the nasal passages would be worth making in many instances of chronic and inexplicable disorder. But I do wish to assert most emphatically that chronic and recurrent bronchitis is frequently due to post-nasal catarrh, and that the causal and dominant germs in the sputum can usually be obtained in pure culture from a nasal swab. Any bacteriologist who has worked with sputa and who knows how difficult it may be to *grow* the germ that he can *see* in the sputum, will appreciate the importance of knowing where he can find profuse and frequently pure cultures.

In some cases of asthma, especially when associated with bronchitis, the nasal passages contain the causal germs, usually *Micrococcus catarrhalis* and *Pneumococcus*, but in the great majority of cases of true asthma the nasal passages show no infection.

Once more I lay stress on the point that obstinate nasal infections in young children depend upon adenoids, and that such adenoids do not necessarily cause nasal obstruction.

I maintain that the person who carries pneumococci or influenza bacilli in his nasal cavities is not really healthy though under ordinary circumstances he may appear so. He is capable of infecting others. In times of stress and unusual effort, and on exposure to "fugs" and chills his infection finds him out. I suspect that such carriers are to be found among the men who developed heart strain under military service, among the business men who become neurasthenic from worry and overwork, and among the women who cannot stand up against the strain of domestic worry.

The man who gets lumbago after gardening, stiffness after tennis, sciatica after sitting on the grass, neuritis from starting his car, and a cold in the head after a long dusty ride is not necessarily "gouty"; he may be simply infected. The pains and disorders which accompany all acute infections show what germs and their toxins can do, and in a mild degree chronic infections produce similar symptoms.

Nasal infections are commoner than pyorrhoea and much more important. I am sure that they are a cause of pneumonia and bronchitis, and lead to pulmonary complications after anaesthetics. Otitis media and its complications begin as infections of the nasopharynx. That chronic post-nasal infection may prepare the way for tuberculous infection cannot be doubted.

Whoever discovers a simple and effective method of sterilizing the nasal passages will deserve the thanks of mankind.

Vaccine Treatment.

I can only hope that what I am about to write will be believed, but, after what has been said and written on vaccine treatment in the last ten years, I can forgive anyone who reads such accounts with the utmost scepticism.

In the past seven years I have treated over 500 cases of chronic catarrh with autogenous vaccines. The patients were not soldiers, nor victims of the influenza epidemic; they were persons suffering from chronic nasal catarrh who were sent to me by their doctors because ordinary measures had failed to cure them.

Before they were sent to me they had tried the usual remedies, nasal douches, nebulizers, antiseptic applications, and so on; they had sometimes benefited by a stay at the seaside, but "caught a fresh cold" on the return journey; naturally, most of them had consulted a throat surgeon, and, indeed, many were sent to me by the throat surgeon with the statement that nothing abnormal could be seen beyond catarrh of the nasal passages. It is to be understood that I am not making any comment on the value of ordinary methods of treatment; I am simply pointing out that these patients had failed to respond to them.

In the case of children vaccines were seldom used, for I soon learnt that chronic catarrh in children is due to adenoids, and can be cured by the surgeon. Why is it so commonly believed that a child who breathes comfortably through its nose cannot have adenoids?

The vaccines were made from the germ or germs which I believed to be responsible, and always from the primary cultures when these were pure. Mixed vaccines were made when two or more catarrhal germs grew profusely on the plates, or when, as sometimes happened, a different infection was found in the two nasal passages.

The vaccine most frequently used was pneumococcus, either pure or combined with some other germ, and the next on the list was Pfeiffer's influenza bacillus (I have not observed any difference since the epidemic); and then *Micrococcus catarrhalis*, *Staphylococcus aureus*, *Streptococcus mucosus*, *B. mucosus capsulatus* (Friedländer's), and, last of all, *B. septus* and *B. coryzae segmentosus*. The vaccines were made in such strengths that 20 minims represented the maximum dose, and I began with 4 or 5 minims and gradually increased, giving twelve doses at intervals of a week. The maximum dose of pneumococcus and streptococcus used was always 150 million for an adult, and of the other germs 300 or 400 million.

The vaccines were administered by the patient's own doctor, and, as a rule, he or the patient reported the result. I have not heard of any difficulties or unpleasant reactions in the course of the treatment.

The results are good; they have been better in the last three years than they were in the first three, simply because I am better able to judge what germs to use in the case of mixed cultures, and because in doubtful cases I insist on repeating the test before I prepare the vaccine. In some instances the vaccine has failed completely, but such cases are fortunately rare.

The fairest summing up I can give—naturally, I have not been able to trace every case—is as follows:

In many cases the patient is pleased and grateful and believes himself cured, there is no sign of catarrh, *but the same germ is still in his nose*, and after two or three years the catarrh will reappear.

In half the cases the catarrh is cured and the nasal passages are normally sterile.

In about a third of the cases the catarrh persists in a modified degree.

Considering the type of case tackled, the results amply justify the treatment, but fortunately there is something more to be said. In the case of a patient with secondary disorders the results of the treatment are still better, for whether the catarrh is cured or only reduced, the general health is improved and the patient gains weight and strength. He ceases to fear chills and "fugs," is in better spirits, and loses the dread (so common in catarrhal subjects) of tuberculosis.

Preparation of Autogenous Vaccines.

I have no experience of stock vaccines, but to those who are interested in autogenous vaccines I should like to say that they will not find nasal catarrh easy at first, but that success will follow if they bear in mind the importance of:

1. A suitable form of nasal swab.
2. The use of good media.
3. The making of cultures *immediately* the swab is taken.
4. The dominating part played by the pneumococcus.
5. The part played by Pfeiffer's bacillus of influenza.
6. Treatment over a considerable period, however rapidly the patient may *appear* to be cured.

Some day we may know why nasal catarrh, so slight and transient an ailment with most of us, proves so obstinate and intractable in some; meanwhile nothing but good can come from further investigation and discussion.

The recent correspondence in this JOURNAL on infective catarrhs encouraged me to publish these data from my own practice.

THE TREATMENT OF CHRONIC URETHRITIS:

WITH A DESCRIPTION OF A NEW INSTRUMENT FOR CAUTERIZING THE LACUNAE.

BY

W. WYNDHAM POWELL, F.R.C.S.,

LATE SURGEON TO THE WESTERN GENERAL DISPENSARY, LONDON.

IN the treatment of chronic urethritis, whether due to the gonococcus or some other microbe, local instrumental methods are more than ever in use, and for the present, at any rate, it is clearly recognized that medicines, injections, vaccines, etc., play only a subsidiary part, and are by themselves, in the majority of cases, of no value whatever unless accompanied by instrumental interference.

It will, I think, be agreed that of all instrumental proceedings dilatation, whether by means of sounds or the four-bladed dilator, is the most valuable, but is far too often neglected. If young surgeons would only thoroughly learn the possibilities connected with dilatation of the urethra under all conditions and stages of disease, it would be infinitely more profitable than experimenting with such doubtful proceedings as electrolysis, hot sounds, suction, etc. I have repeatedly seen cases in which the urethra, already narrowed to half its size by recent infiltration, had been subjected to electrolysis for the cure of a discharge without benefit, and not infrequently with positive harm, when a few simple dilatations would have effected a cure.

The treatment of gleet by means of bougies is very old. Benjamin Bell in 1785 was perfectly cognizant of the good effect of dilating the urethra in cases of gleet, and says "that the largest bougie that the urethra will take should be passed for its cure."[1]

In my opinion every case of gonorrhoea—certainly every prolonged attack—should be subjected to a dilatation on recovery. The young practitioner will be surprised to find how frequently contractions will be present without signs or symptoms. He should not take too literally the patient's statement that the stream of urine is perfect. He may be an optimist or merely unobservant. Only a few days ago I performed urethroscopy on a man who complained of a slight urethritis of a week's duration. It was his first attack so he repeatedly assured me. Imagine my surprise on finding an advanced stricture in the bulbous urethra. On being pressed he confessed to a similar slight attack eighteen months before which was not worth bothering about or mentioning. His present non-gonococcal discharge was probably a relapse, after alcohol, of his previous urethritis.

Almost all inflammatory processes of the urethral mucous membrane throw out cellular deposit, of which part, should absorption be at all delayed, becomes converted into young fibrous tissue. If the irritation be prolonged, sufficient material will be deposited to cause considerable narrowing of the urethra, which may or may not progress to form real stricture, and eventually interfere with the urinary stream. The mucous membrane may heal without instrumental assistance in any of these stages and the discharge cease.

J. D. First gonorrhoea ten months ago, cured in four months. Never had an instrument passed. Wishes to marry, and comes to make sure that he is well. No symptoms, no discharge, no threads. Says the stream is as good as ever. Urethroscopy: Strictures from one to three inches; admits No. 15 F. only. Could dilate only up to 17 F. at first sitting, which means a condition of dense induration. I have partially softened this with the electrolytic sound connected with the positive pole of the battery, after the method of Luys, using 10 milliampères for ten minutes. The silver-plated sound which fits the urethra fairly firmly may be kept on the move or the current reversed for a few moments before withdrawal. This is the only condition in which general electrolysis of the urethra appears to be of any use.

Occasionally cases of persistent discharge are met with where no infiltration material has been thrown out, and these are among the worst cases one has to deal with. Fortunately they are not common.

E. T. Married recently. Gonorrhoea five years ago; many relapses. Says he has not been reinfected since. Discharge and heavy flakes crowded with gonococci. His wife also has a discharge containing the gonococcus. Urethroscopy: Mucous membrane very flabby, like perished rubber. Four-bladed dilator up to 80. No resistance. Vaccines may be tried. Lost sight of him.

On the other hand, extensive deposits may take place early during an attack, certainly at the end of one month, the result of bacterial activity, often reinforced by the chemical irritation of concentrated injections or strong irrigations.

M. T. First gonorrhoea two months ago. Mild attack with very little discharge. Had solution of argyrol sealed in the urethra for three hours on twelve different occasions; does not know the strength. Gonococci now abundant. Urethroscopy: Pronounced infiltration one to three inches; admits 21 F. with pressure and followed by slight bleeding. After a week 23 F. passed easily without pressure and with no bleeding, showing rapid absorption.

These deposits in themselves are of a beneficent nature, and represent the local effort to combat the disease. They are therefore the surgeon's friend if he recognizes the condition before much organization has taken place. Anyone who has carried out a dilatation or two under such circumstances will remember the astonishing rapidity with which the discharge disappeared. In this connexion it should be mentioned that recent deposits may become absorbed to a considerable extent without the assistance of an instrument if the irritation be removed.

G. B. Gonorrhoea ten months ago. Discharge ceased after two months. Two relapses since. Has used pretty regularly an injection of argyrol 5 per cent., holding it in for ten minutes, three times a day. Urethroscopy: Patchy infiltration stained black by the silver extending from 1 to 4 in.; admits a No. 24 F. cannula only. No dilatation done. To discontinue the injection, and to come for treatment in a week. His military duties prevented him from coming for eight months, when the canal was found to be wide and pale, and with only a trace of sclerosis. He had had no treatment. A 27 F. sound was passed easily, and a few days later a four-bladed dilator up to 68. Recovery was complete.

The commonest region to be affected with infiltration is what may be called the glandular and lacunar area, extending from the lacuna magna at three-quarters of an inch from the meatus for about three and a half inches. It affects in the first place the roof chiefly, but eventually extends around the canal. It is somewhat superficial at first, and if left untreated may heal, leaving behind slight general sclerosis or isolated strictures of large calibre. On the other hand, the infiltration may spread more deeply and the contracting process progress so as to interfere eventually with the urinary stream. It must be borne in mind, however, in connexion with the frequency of infiltration in this region that strong injections which cause, or assist in causing, these deposits are often used indifferently or are intentionally injected so as to reach only 3 or 4 in. of the urethra.

Much less frequently met with is an infiltration of the region of the bulb where severe stricture is commonest. This seems paradoxical, but the explanation is that an infiltration in this situation is of more serious import than elsewhere, owing to the laxity of the mucous membrane

and the quantity of cavernous or spongy tissue surrounding it, which favours extensive deposits of fibrous tissue and rapid contraction. The hypothesis that this region is more prone to inflammation and stricture than elsewhere owing to its dependent position favouring the collection of pus is not borne out by fact, as, urethroscopically, no more secretion is found there than elsewhere. As in the part anterior to it, infiltration of the bulbous urethra begins in the roof, and can be seen as fine white transverse bands on strong air distension. These can be distinguished from the muscular fibres found in this situation by the sharpness and whiteness of their free edges, and sometimes by their asymmetry. When they involve the floor of the urethra they are easily detected, as this part is otherwise smooth and free from ridges. Although the muscular fibres, both smooth and striped, which encroach on the bulb, chiefly on the roof, as an extension of the non-striped sphincter and compressor urethrae, have to be strongly expanded with air before the farthest stricture bands can be seen, I have never seen stricture definitely in the membranous urethra. Stricture has been described, however, in this situation but only as an extension backwards of a bulb stricture, and Bazy and Decloux describe and illustrate with four or five beautiful illustrations the normal and strictured membranous urethra in such a case.[2]

Infiltration of the prostatic urethra may lead to a certain amount of sclerosis, accompanied by an irregular thickening of the veru montanum, but it does not usually lead to the formation of a stricture, although a few isolated cases have been recorded. This immunity is due to the scantiness of the submucous cellular and cavernous tissue and the firm support provided by the dense fibro-muscular tissue of the prostate. It is significant that the urethra only becomes liable to stricture after it has entered the corpus cavernosum urethrae (corpus spongiosum) at the bulbo-membranous junction, and the rapidity and especially the degree of the narrowing, appears to depend on the quantity of cavernous tissue in its vicinity, which diminishes from behind forwards. On the other hand, the incidence of infiltration runs *pari passu* with the richness in gland elements and decreases from before backwards. The fossa navicularis, which has a smooth mucous membrane covered with pavement epithelium and sparsely supplied with glandular elements, is only occasionally affected with gonorrhoeal stricture.

When to Dilate.

No doubt considerable experience is necessary to decide at what period in the course of an attack it is safe or desirable to begin dilatations. If begun too soon the reaction which follows may develop into a veritable relapse, and this may spread, with its attendant possibilities, to the hitherto healthy posterior urethra. On the other hand, if unduly delayed, or if deferred until the gonococcus disappears, as is advised by some writers on this subject, the inflammatory deposits will be given time to organize into fibrous tissue and the most favourable opportunity for bringing about their absorption allowed to pass, to say nothing of the fact that these deposits shut in and shelter the microbes in the pockets and recesses of the mucous membrane—a most important factor in the prolongation of the disease.

Urethroscopy.

After a month the question of an anterior urethroscopic examination arises. Florid cases must be excluded from this category and their examination deferred. In mild first attacks urethroscopy may be undertaken after one month or sooner, especially if the patients have undergone irrigation treatment and a condition of tolerance attained, or, in other words, the chronic stage anticipated. Second and especially subsequent infections can often be examined after a couple of weeks, the discharge rapidly subsiding after a few good irrigations with a 1 in 5,000 solution of potassium permanganate. Examination with the air-inflation urethroscope is much less irritating than an exploration by means of a *bougie à boule*. If a smallish tube be used, no part of the urethra need be touched except the immediate neighbourhood of the meatus. As a rule—but there are many exceptions—when the posterior urethra is sufficiently affected to dull the urine, anterior urethroscopy, like other instrumentation, must be deferred, although it should be borne in mind that this condition is sometimes kept up by a stricture, due to a previous attack, which may require dilatation before the urine has cleared or will clear up. The posterior urethra does not lend itself well to air distension, but may be examined by means of a six-inch straight or elbowed tube without air inflation. A better method is by means of a water circulation urethroscope, such as Wossidlo's or Geiringer's. Fortunately a urethroscopic examination of this part of the canal is only rarely necessary, and, as a rule, should not be undertaken until at least nine or twelve months have elapsed, and then only after a course of instrumentation by sounds.

Method of Using a Dilator.

When using a straight dilator one of the blades should be applied to the centre of the roof of the urethra to bring pressure to bear on the important area of the lacunae. The dilator is then closed and rotated just a little so as to bring the blades to a fresh section of the mucous membrane and dilate as before. This is to be repeated once or twice, rotating the instrument each time and taking only three or four minutes over the whole proceeding. The blades of a dilator should be as broad as possible. A good one is made in all nickel by Gentile of Paris. The operator should be familiar with the strength necessary to use under all circumstances, from the gentlest pressure in cases of early soft infiltration to the firm pressure necessary in advanced organization of the deposits.

Dilatation is carried out by means of sounds, so long as the meatus will accept them; afterwards, if it is necessary to go higher, the four-bladed dilator must be used. Straight six-inch sounds and straight dilators are used for the penile urethra and curved ones for the bulbous part. To decide whether a curved instrument should be used or not—and they are not so simple to use as the straight—aëro-urethroscopy is invaluable. The bulbous part being a wide and dilatable section of the canal any narrowing is easily detected, except in the immediate neighbourhood of the bulbo-membranous junction, where muscular fibres close the canal and bother the diagnosis. For each time a curved dilator is required a straight one will be used perhaps fifty times. Air or water pressure does not affect the deposits; they only strain the unaffected parts.

Dilatation is carried out about every ten days in early cases of infiltration and every five days in advanced cases. There are, however, many exceptions to this rule. The effect of dilatation being physiological, time must be allowed for absorption of the deposits to take place. If dilatation be repeated too soon in a case of soft infiltration it will be found that the reactive congestion prevents so large a size being soon repeated without bleeding or excessive reaction. The good effect will continue for at least two or three weeks, and the amount of absorption that will follow one dilatation in suitable cases is astonishing. In follicular cases, where the disease is somewhat strictly confined to the follicles, care must be taken not to overstretch the urethra, or injury to the healthy fibrous, elastic and muscular elements of the mucous membrane will result, and a condition of flabbiness or paralysis set up, there being no general infiltration to resist the pressure.

Every instrumentation should be preceded by irrigation of the urethra with a solution of mercury oxycyanide 1 in 5,000, and followed by one of potassium permanganate of the same strength, or of silver nitrate 1 in 8,000. If these details are carried out effectively, a plain dilator is quite as good as an irrigating one. There is no particular degree to which a dilatation should be carried at each sitting. Every case is a law unto itself. The resistance is the guide. In a recent case where resistance is slight the dilator should be withdrawn once or twice and the urethra stripped, when a trace of blood will give warning that enough for the time has been done. The discharge may disappear long before all the deposit has been absorbed. Dilatations should, however, be continued and the urethra restored to, as near as possible, its original size.

The dilator is not often required for the prostatic urethra, large sounds being preferable and usually sufficient, if the meatus is large enough to take them. Silver nitrate irrigations are especially suitable for the posterior urethra in chronic cases, and may be used also either after an instrument or after a prostatic massage, in strengths varying from 1 in 10,000 to 1 in 5,000. In inveterate cases painting the prostatic urethra with a 1 in 8

solution of silver nitrate through a urethroscopic tube is an eminently satisfactory proceeding. Instillation of a solution of silver nitrate is a disappointing form of treatment, except perhaps in chronic inflammation of the vesical trigone, and should be given up in favour of the sound and irrigator.

Instrumentation should be temporarily suspended if gonorrhoeal rheumatism supervene. This applies to the anterior as well as to the posterior urethra. Vesical irrigation after a strong anterior dilatation must be made at a low pressure, not more than 4 ft., or haemorrhage may follow. The usual height of the reservoir is 5 ft. to 6 ft. above the urethra for an anterior and 4 ft. or 5 ft. for a vesical irrigation.

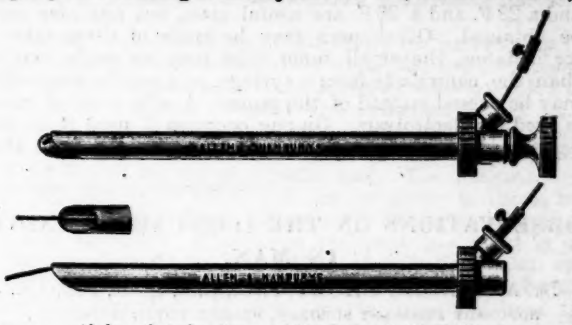
To facilitate the entry of fluid into the bladder if deep breathing and relaxation fail, the patient should endeavour to empty his urethra of the last few drops of urine. This brings the ejaculator urinae into action and the fluid in the anterior urethra will be pumped into the bladder, this being the path of least resistance. The same result may be obtained by the patient endeavouring to close the anus tightly a few times.

Personally I always use a little cocaine to facilitate the entry of fluid into the posterior urethra and bladder, and also for instrumentation. Five or ten drops of a 1 per cent. solution injected into the urethra with an eye dropper and massaged backwards into the posterior urethra is suitable for all purposes. The solution is made up with a 1 in 2,000 solution of mercury oxycyanide, which sterilizes it.

Cauterization of the Lacunae.

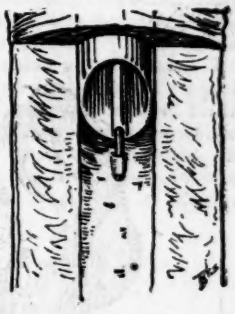
The point to which I wish particularly to draw the attention of genito-urinary surgeons is that in a certain number of cases dilatation fails to bring about recovery and the discharge continues, and the question then arises, What more can be done to effect a cure? On performing urethroscopy (and I may say in passing that my pattern aëro-urethroscope with magnifying telescope is the best for the purpose), one, two, or a series of small swellings may be seen along the roof of the urethra (occasionally one may be found situated on the side wall or floor), each with a small, swollen, often crateriform orifice pointing towards the meatus; they may or may not contain pus. These are the inflamed and suppurating lacunae of Morgagni, which may keep up a discharge long after the other parts of the urethra have recovered. Other sources of pus in the anterior urethra are minute abscesses connected with the submucous glands of Littré, which burst and continue to leak through a small sinus on to the surface of the mucous membrane or into a lacuna. The more superficially placed glands and the follicles, which are superficial immature glands of Littré, usually empty their inflammatory contents through their natural outlet.

It is obvious that if dilatations and irrigations fail to clear out these foci—and this often happens—something more has to be done to expedite recovery. In the BRITISH MEDICAL JOURNAL of September 26th, 1908, I described a new method of cauterizing these pockets in the air-distended urethra, which was a great advance on former methods, and this proceeding has been largely adopted by genito-urinary surgeons in this country, the destructive agent used being either silver nitrate or electrolysis. There is not much to choose between these two agents—the latter is the more precise and cleanly, while the former is the more readily available. As in ninety-nine cases out of a hundred nothing more is required than a caustic-covered probe-point for the destruction of these foci, it occurred to me that if a simpler method than the interposition of a collapsible mount, as in my operating urethroscope, could be devised, the treatment would be simplified and brought within the range of a much larger number of surgeons. With this end in view I have had made for me by Messrs. Down Brothers an ordinary four-inch urethral cannula with a small tube running along its inner wall. This inner tube, which is about a millimeter and a half in diameter, tracing it outwards, leaves the cannula obliquely near the flange, and terminates externally right away from the line of vision. A small screw cap fixing a rubber disc, through which the probe passes prevents the escape of air. This arrangement is superior to all devices which entail the passage of the probe through the window of the urethroscope. The distal end of the small tube terminates just within the end of the cannula, and is slightly elevated to direct the probe a little towards the centre of the urethra. Should the end of the probe when projected not be well seen when looking down the cannula, it may be slightly bent to bring it clearly into view. (See illustration.)



An essential point in its practical use is that the cannula being *in situ* in the urethra, and the probe projected beyond it for three-quarters of an inch or so, the latter need not be touched again, but the probings done by grasping the urethroscope firmly and manipulating the cannula and probe together in the urethra. This leaves the left hand free to steady and make traction on the penis. The expert will often treat the lacunae before commencing dilatations.

Directions for Use.—After boiling the cannula remove the probe and thoroughly dry both. Replace the probe and project it beyond the end of the cannula for an inch. Heat the point in a spirit flame and melt on to the terminal quarter of an inch a minute film of silver nitrate and withdraw the probe into its sheath. This, besides protecting the caustic, ensures a thin film only being used. The oiled cannula is next introduced into the urethra to its full extent, keeping the side containing the probe in contact with the lacuna, the obturator is removed, and the excess of lubricant mopped out with stylet and cotton. The urethroscope is securely fixed into the cannula and air admitted under direct control of the eye. The probe is then projected into the middle of the inflated urethra for three-quarters of an inch or as much as may be necessary,



and, as the cannula is being slowly withdrawn and the lacunae brought into view, it can be introduced into them while tilting the distal end of the cannula a little towards the affected wall. This proceeding may be compared with that of slipping the hand into the inside breast pocket of the coat, to which a normal lacuna in an inflated urethra may be compared in miniature. All the affected lacunae may be treated at one sitting, but the quantity of silver nitrate will be found sufficient only for three or four without renewal. A lacuna has a depth of only one-sixth to one-fourth of an inch (four to six millimetres), and is comparatively wide, so that the probe should be moved from side to side.

Subsequent treatment consists in the use of a mild antiseptic injection, such as zinc permanganate (one-eighth grain to an ounce of water), by means of a hand syringe, or, better still, a daily irrigation with a solution of potassium permanganate 1 in 5,000. The patient should be warned of some increase in discharge for a day or two, and that possibly it may be blood-stained. After a week or so dilatations are resumed. If a urethroscopic examination be undertaken at the end of a fortnight the cauterized lacunae may be found distended with the air used for inflating the urethra. This phenomenon occurs frequently also in lacunae that have recovered from prolonged inflammation without having been subjected to cauterization, and is due to the cicatrization and contraction of their free edge, which then acts like the taut string of a bow. This appearance occurs normally in a well developed lacuna magna, so that its interior can be viewed under aëro-urethroscopy.

This altered condition of the lacunae is one of the reasons why the urethra that has taken a long time to recover, or has been subjected to many attacks, recovers

from a new infection with such remarkable rapidity after a few irrigations with potassium permanganate, the solution freely entering the lacunae and flushing them out.

It is advisable to stock at least a couple of these tubes, and a 22 F. and a 26 F. are useful sizes, but any size can be obtained. Other uses may be made of these tubes: for instance, the small inner tube may be made longer than the cannula to form a syringe, or a capillary syringe may be passed instead of the probe. A silk covered wire is used for electrolysis. On one occasion I used it as an écraseur by passing a fine steel wire doubled from the distal end, thus forming a loop. The base of a wart which has been shaved off with the thinned end of a cannula, or a warty area, can also be cauterized in the distended urethra.

I have used this method of treating the lacunae constantly for five or six years and can thoroughly recommend it as a practical, efficient, and expeditious substitute for the probe and collapsible mount.

REFERENCES.

[1] Benjamin Bell, *System of Surgery*, vol. ii, second edition, 1785.
[2] *Ann. de mal. d'org. gén. urinaire*, Paris, 1903, xxi, 1601, p. 241.

OBSERVATIONS ON THE ILEO-CAECAL VALVE IN MAN.

By A. RENDLE SHORT, M.D., B.S., B.Sc., F.R.C.S.,

HONORARY ASSISTANT SURGEON, BRISTOL ROYAL INFIRMARY; LECTURER ON PHYSIOLOGY, UNIVERSITY OF BRISTOL.

A PATIENT has recently come under my care in whom the ileo-caecal valve was visible on the surface. Exceptional opportunity was therefore afforded for observations on its behaviour.

The patient, a well nourished, intelligent man, aged 39, suffered from dysentery in Salonica in December, 1916. In September, 1917, caecostomy was performed at another hospital on account of chronic dysentery. The whole of the caecum prolapsed through the wound and turned inside out, and this condition has remained ever since. The large intestine has been irrigated regularly, and there is little or no discharge from it now. An operation to remedy the condition is contemplated shortly, probably

FIG. 1.—The ileo-caecal sphincter at rest.

excision of the caecum and ascending colon with the termination of the ileum, and end-to-end anastomosis of the ileum and transverse colon.

PRESENT CONDITION.

A mass of prolapsed bowel, about the size of a large orange, is seen over the right iliac fossa. It is covered with mucous membrane, which is the mucosa of the caecum turned inside out. At the upper end the orifice leading to the ascending colon can be found beneath a fold. There is no thickening or inflammation or ulceration. The thin wall of the caecum is spread out over coils of ileum, which are not themselves visible, but through the covering of caecum it can be seen that these coils of ileum are in incessant peristalsis; fasting or feeding they are never still.

THE ILEO-CAECAL VALVE.

In the centre of the protuberant mass the ileo-caecal valve is plainly visible all the time. In the somewhat similar case described by A. H. Rutherford[1] the valve could only be seen by drawing aside a fold of mucosa. Through the orifice all the motions pass and are collected in a receptacle. Nothing passes on into the ascending colon.

It is clear at a glance that the ileo-caecal valve should rather be regarded as a sphincter than a valve. It is oval in shape. There is a well marked ring of muscle surrounding it, slightly raised above the surface. Three or four puckers are visible radiating from the slit-like orifice. When the sphincter is contracted it is about three-quarters of an inch long. No folds of ileal mucosa are then visible. It grips the inserted finger.

When the patient is lying quiet in bed the sphincter remains closed, and nothing comes through for hours at a time. Occasionally there may be a little passed, but I have not seen it myself. When the patient is up and about there is rather more activity.

The effectual factor in bringing about activity is the taking of food by mouth. This never fails. Fluids or solids have the same effect, but especially a proper meal of solids. I have timed the reflex on various occasions. It may take place in one and a half minutes, or may be delayed for four minutes.

When activity commences the sphincter relaxes, the orifice lies patent, and may measure 1½ in. across. Folds of ileal mucosa are exposed to view. Having relaxed, it does not contract again until activity ceases, in this respect differing from the pylorus.

First there comes through a spit or two of gas and bubbles, then follows a gush of liquid orange or brown-coloured faecal matter. This continues to come through in

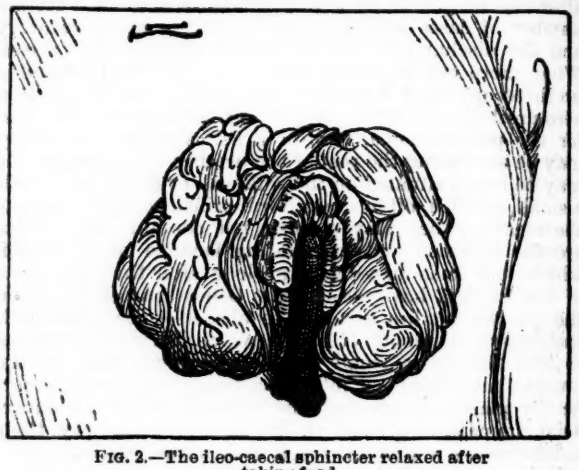


FIG. 2.—The ileo-caecal sphincter relaxed after taking food.

gushes of about ½ oz. at a time at intervals of half a minute, more or less. This goes on whilst food is being taken, and for a variable time, usually about an hour afterwards, unless the food consisted only of a biscuit or glass of milk, in which case the orifice ceases to discharge after twenty minutes or so. Articles of undigested food, such as currants, take about six hours coming through from mouth to ileo-caecal valve.

SPECIAL OBSERVATIONS.

Secretion of Succus Entericus.—On one occasion, just after taking food, the first gush to come through was not faecal, but consisted of a drachm or two of clear watery fluid. It seemed as if the swallowing of food had provoked a reflex secretion of succus entericus, and that on this particular occasion there happened to be no faecal matter in the terminal inches of the ileum, so that the succus entericus came through in a pure state. In ordinary it would be mixed with faeces.

Acid and Alkali Reflexes.—It is well known that the pylorus is controlled by the acidity or alkalinity of the contents of the duodenum. I applied acid solutions, and on another occasion alkaline solutions, to the caecal mucosa near the orifice, both when it was active and when it was quiescent. Neither acid nor alkali had any obvious effect in hindering or stimulating the activity of the ileo-caecal sphincter. This point, as far as I know, has not been investigated before, but the result is not surprising. The conditions of activity of the pylorus and the ileo-caecal sphincter are quite different.

Bismuth Skiagraphy.—Not much information could be obtained by this means. The stomach was viewed with the fluorescent screen, and behaved normally. After four hours a small trace of the bismuth meal remained in the stomach, but most of it was in the pelvic coils of the ileum. On one occasion an attempt was made to determine whether irritation of the caecal wall had any reflex effect in delaying the emptying of the stomach. A clip was applied to the caecal mucosa near the valve, and left on; at the same time a bismuth meal was given. It was found impossible to keep the clip applied; the peristaltic movements of the ileum underneath repeatedly threw it off. The stomach emptied in the normal time.

Influence of Local Stimulation on the Activity of the Ileo-caecal Sphincter.—It was not possible by stimulation of the mucous membrane of the caecum to start efflux. On the other hand, I repeatedly found that pinching up a fold of caecum near the orifice, when it was in full activity after a meal, delayed the outflow and made the jets less frequent, though it did not check them altogether. This is of considerable importance, as bearing on the question whether chronic inflammation in the ileo-caecal region, as for instance chronic appendicitis, can delay the passage of bowel contents through the sphincter.

Influence of Enemata.—In Rutherford's case, enemata given per rectum stirred up more activity in the ileum than in the colon. In the present observation, enemata and colon wash-outs did not provoke activity of the ileum or discharge of ileal contents.

Plugging the Orifice.—In Rutherford's case inserting a finger into the sphincter caused pain and spasm. My patient, on the other hand, wore a plug in the hole for some time before he came to me, without inconvenience. It was used, so he said, to control the efflux, but needless to say, it failed to do so.

REFERENCE.

[1] A. H. Rutherford, *The Ileo-caecal Valve*, 1914.

RENAL EFFICIENCY TESTS IN NEPHRITIS AND THE REACTION OF THE URINE.*

BY

J. B. LEATHES, M.B., F.R.S.,

PROFESSOR OF PHYSIOLOGY, UNIVERSITY OF SHEFFIELD.

THE functions of the kidney include three that are equally important—the excretion of the nitrogenous end-products of metabolism, the regulation of the osmotic tension of the blood by the removal of a fluid of higher or lower tension as the case may be, and lastly, the regulation of the reaction of the blood. The efficiency of the kidney in nephritis in regard to the first two of these functions has been studied by many; in regard to the last, only, so far as I know, by Henderson and Palmer. They collected the daily urine of large numbers of nephritic subjects, and found that it tended to be more acid than that of other subjects.

I started some years ago in Toronto the investigation of the nephritic kidney in the performance of this function, but the work was interrupted before much more had been done than to employ for taking the reaction a double titration method, using methyl orange and phenolphthalein. In a solution of sodium phosphate, if all the phosphate is acid phosphate, methyl orange turns pink; if any of it is dibasic this indicator is yellow; when it is all dibasic, and not before, phenolphthalein turns pink. In a solution of mixed phosphates, therefore, by titrating on the one hand with methyl orange and N/10 acid the amount of the dibasic phosphate present is determined, and on the other with phenolphthalein and N/10 soda, the amount of acid phosphate present is determined, and the ratio of the amounts used in the two titrations gives the ratio in which the two phosphates are present. This ratio varies with the reaction, and the reaction of the phosphate mixture may be given as so much per cent. acid or so much per cent. alkali, according to the results of the titration. The reaction of the urine practically always lies between these two points, the turning points of methyl orange and phenolphthalein respectively. And since the principal constituents of the urine that determine its reaction are the phosphates, the reaction of the urine may be expressed in the same way as that of a pure phosphate solution, in acidity or alkalinity per cent.

In 1916 an exceptional opportunity for prosecuting inquiry into this subject occurred when the nephritis cases of the 3rd Northern General Hospital were collected together in a branch hospital and entrusted to me. The method of testing the condition of the kidney, which I used during two and a half years at this hospital, was what is well known as a water test. The patients, kept in bed, received at 8 a.m. 500 c.cm. of water to drink, but had no food or drink otherwise from supper the night before till noon. Urine was collected, measured in six fractions, from 11 to 7 and then at 8, 9, 10, 11 a.m. and 12 noon; in each the reaction was determined by the method described. It soon became apparent, from the study of perfectly normal subjects under the same conditions, that a large number of the cases still undergoing treatment for nephritis reacted to this test exactly as the normal organism, while others did not. The normal subject produces during the night a urine that is acid, as does also the nephritic subject, but in the morning the reaction in the normal subject swings strongly over to the alkaline side. This more alkaline reaction persists generally to the last specimen collected.

In nephritic patients often the acid reaction persists throughout the test. Normally, of course, too, the urine, scanty during the night, becomes very abundant after drinking water. It is well known that in nephritis diuresis often cannot be produced by drinking water. When there is no diuresis there is frequently not any change in the reaction either, and cases of this kind occurring early in the series studied, suggested naturally that the change in reaction constant in the normal subject undergoing the water test was merely that which, as was shown by Rüdel in 1892, accompanies any diuresis. But tests done on the normal subject and similar in all respects except that the amount of water taken was reduced to 250 or to 100 c.cm. and that consequently the diuresis was proportionately reduced, showed that nevertheless the change in reaction persisted in the same degree as when diuresis was well marked; results are given in Table I that were obtained in this way.

TABLE I.—*Normal Subjects.*

(Three tests done on the same normal subject.)

	Diuresis, c.cm. per hr.		Alkalinity per cent.	
	Before.	Maximum After.	At Night.	Maximum (at 10 or 11 a.m.).
I. 500 c.cm. ...	40	285	20	91
II. 250 c.cm. ...	27	116	23	85
III. 100 c.cm. ...	37	88	20	89

Precisely similar results were obtained from three tests done on another normal subject, the conditions observed being in all respects the same as in the water tests done on nephritic patients, except as to the amount of water taken in the experiments numbered II and III in Table I.

With more experience of the reaction to the test in nephritic patients it soon became apparent that in them, too, the phenomena occurred separately and were independent of one another. For, in the first place, the matutinal alkaline tide was undiminished in many cases in which the drinking of 500 c.cm. of water produced little or no diuresis, and, secondly, a considerable number of cases were observed in which the diuretic response was normal or but little impaired, while the alkaline tide was missed altogether.

The study of nephritic patients in this way, therefore, brought to light three abnormal types of response—one in which there was little or no diuresis but a normal alkaline tide (Groups III and IV, Table II), one in which there was a diuretic reaction but no alkaline tide (Group V in Table II), and a third in which neither the one nor the other of these phenomena was present in a normal degree (Group VI in Table II).

*Communicated to the Association of Physicians at the annual meeting, July 11th, 1919.

TABLE II.—*Nephritic Subjects.*

Mean figures for response to 500 c.cm. water in nephritis:
Groups I and II practically normal.
Groups III and IV showing tendency of diuresis to be weakened, but normal alkaline tide.
Group V showing fair diuresis but little alkaline tide.
Group VI showing little diuresis and little alkaline tide.

	No. of Cases or Tests from which Mean Figures are Calculated.	Diuresis, c.cm. per hour.		Alkalinity per cent.	
		Before.	Maximum After.	At Night.	Maximum (at 10 or 11 a.m.).
I. Normal...	49	55	336	27	84
II. Normal...	65	55	256	26	73
III. Weak ..	51	61	182	23	74
IV. Weaker...	16	56	96	30	74
V.	56	63	221	22	42
VI.	53	75	115	22	36

Of these abnormalities in the water test of cases of nephritis, the failure of the diuretic response has long been known and discussed; the absence of the alkaline tide is new. In order to understand its significance, the significance of the matutinal alkaline tide in the normal subject must be defined. It is a striking phenomenon which can be observed also under the ordinary conditions of life when the subject is up and takes the usual meals. It is, indeed, then sometimes even enhanced by the diuretic action of the drugs, tea, and coffee, but sometimes partially obscured by other complicating activities, the intercurrent influence of which is eliminated under the standard conditions of the water test. And incidentally, it should be observed, the traditional ascription of the alkaline tide to the secretion of hydrochloric acid in the stomach appears to be erroneous. An intense alkaline tide is normal in the morning when no food is taken; alkaline tides after other meals than the first in the day are certainly not the rule, and in the experience of the writer do not occur. It is not even *a priori* probable that they should, since the passage of acid from the stomach is the signal for the secretion of alkaline digestive juices into the small intestine, and for absorption into the blood from the intestine to begin.*

The morning alkaline tide suggests correlated variations in the activity of the other function concerned, in addition to that of the kidney, with the regulation of the reaction of the blood—namely, respiration. That respiratory activity can effect the reaction of the urine in a very marked degree is shown by experiments in which the subject voluntarily increased the depth of his breathing for an hour or even half an hour at times when the reaction of the urine is otherwise certainly acid—for instance, in the late afternoon, or still more in the middle of the night. This experiment has been done many times in the afternoon on different subjects. The following figures are typical of the result obtained:

TABLE III.—*Effects of Forced Breathing.*
(J. B. C., July 7th, 1919.)

Time.	C.cm. per hour.	Alkalinity per cent.	Remarks.
1 to 2.45 p.m. ...	84	28	—
to 4.10 ,, ...	56	36	Voluntary hyperpnoea from 4.30 to 4.50
to 4.55 ,, ...	123	91	—
to 5.35 ,, ...	54	82	—
to 6.22 ,, ...	32	44	—

At night the tendency to apnoea that the hyperpnoea induces does not make it easier to lie awake and carry on deep breathing; but in all experiments in which this difficulty certainly was overcome results such as that which follows were obtained.

TABLE IV.—*Effects of Forced Breathing.*
(J. B. L., March 17th, 1919.)

Time.	C.cm. per hour.	Alkalinity per cent.	Remarks.
11.10 p.m. to 2.10 a.m.	92	31	Sleeping in bed.
to 3.10 ,,	100	71	Hyperpnoea in bed for one hour.
to 4.50 ,,	59	61	Sleeping.
to 6.5 ,,	59	51	Sleeping.
to 7.40 ,,	49	46	Sleeping.
to 8.50 ,,	58	53	Up; 400 c.cm. tea at 7.45.

In some experiments not yet concluded the amount of carbonic acid washed out of the system by the voluntary hyperpnoea has been measured. In that from which the following figures were obtained the attempt was made to keep the depth of hyperpnoea uniform throughout a period of twenty-five minutes and the air expired in each fifth minute was collected, and it appeared that 27.4 litres of air containing 1.8 per cent. of CO_2 had been expired per minute.

TABLE V.—*Effects of Forced Breathing.*
(W. R. C., June 13th, 1919.)

Time.	C.cm. per hour.	Alkalinity per cent.	Remarks.
3.50 to 5.10 p.m. ...	92	36	—
to 5.35 ,, ...	50	41	—
to 6.30 ,, ...	67	93	Hyperpnoea from 5.50 to 6.15.
to 7.20 ,, ...	26	39	—

It is easy, therefore, to show that the reaction of the urine can be made alkaline by increased respiratory activity. But in order to show that the morning alkaline tide is accounted for by depression of the respiratory centre during sleep and increased activity on waking, it is necessary to determine the percentage of CO_2 in the alveolar air immediately on waking and some time later. For this purpose the apparatus for collecting alveolar air was fixed up overnight (close to the subject's bed), so that within two or three seconds of waking a sample could be obtained. The following results have been so far obtained:

TABLE VI.—*CO_2 in Alveolar Air.*

Date.	Subject.	Time.	CO_2 per cent. of Alveolar Air.	Remarks.
1919. June 27...	W. R. C.	3.55 a.m.	7.40	In bed immediately on waking.
		7.10	6.63	After rising.
July 5 ...	J. B. L.	1.45 a.m.	6.13	In bed immediately on waking.
		7.30	5.38	After rising.
July 7 ...	J. B. L.	6.40 a.m.	6.13	In bed immediately on waking.
		6.49	5.74	After rising.
		8.30	5.46	After rising.
July 8 ...	S. L.	7.15 p.m.	6.46	—
		2.45 a.m.	6.76	Immediately on waking
		8.0 a.m.	5.07	Up, and 1½ hours after waking.
July 9 ...	S. L.	4.20 a.m.	6.50	Immediately on waking
		7.40 a.m.	5.52	Up; 1 hr. after waking.
		8.15 a.m.	5.07	—

The figures given are corrected for aqueous vapour except in the experiment of June 27th, done by Dr. Campbell; with that exception the analyses were done by Dr. F. A. Duffield.

On every occasion in this short series of experiments the results indicate a higher percentage of CO_2 in the lungs during sleep, and therefore give support to the hypothesis that the morning alkaline tide is related to variation in the activity of the respiratory centre—the experiments are being continued.

* I was reminded by Dr. Poulton that Hasselbalch (*Biochem. Zeitsch.*, 46, p. 416, 1912) found the urine to become less acid after meals; but his results were more exactly these: "After each meal the urine was, without exception, more acid than before, but showed the lowest acidity about three hours later." This applies to breakfast at 8.30 and lunch at noon; the urine after the evening meal was not examined. No attention was paid to the volume of the urine, and no data are given as to the amount of fluid taken or the hours at which it was taken, so that it is impossible to say whether the tendency for the urine to become more alkaline between 2 p.m. and 3.30 p.m. was or was not accompanied by diuresis. I do not think his figures give support to the traditional alkaline tide ascribed to gastric secretion.

Whether or no this proves to be the true explanation, the interpretation of the failure of the kidney in certain stages and cases of nephritis to show any morning alkaline tide still requires investigation; this is being prosecuted. But in the cases available for the work of which this is a preliminary report it is not a failure of the kidney in its power to turn out acid that is indicated; the abnormality is that the kidney gives an acid urine in conditions in which a normal kidney gives an alkaline urine. The question arises, therefore, whether this abnormality may not be an expression of an effect of the disease of the kidney on the function of some other organ. The gradual return to the normal type of response shown in tests done on the same patient at intervals of two or three weeks during recovery is striking, and in a fuller account of the work to appear later will be illustrated by protocols.

NOTES ON THE INFLUENZA EPIDEMIC IN THE EGYPTIAN EXPEDITIONARY FORCE.

BY

J. D. BENJAFIELD, M.D., B.S.LOND., M.R.C.S., L.R.C.P.LOND.;

LATE TEMP. CAPTAIN R.A.M.C.; LATE O.C. 37 MOBILE BACTERIOLOGICAL LABORATORY (WELLCOME PRESENTATION LABORATORY.)

Epidemiology.

THE epidemic in this force commenced in May, 1918, but the maximum incidence was not reached till September and October. The cases during the earlier period of the epidemic were on the whole mild in type and of short duration, only a very small proportion being complicated by bronchopneumonia.

In patients already debilitated by malignant tertian malaria influenza proved much more serious, many developed bronchopneumonia, and considerably over 50 per cent. of such cases ended fatally.

The epidemic continued throughout November, December, 1918, January and February, 1919, but the number of cases showed a marked decrease during the last two months. In the latter part of the epidemic few of the cases were complicated by malaria, and one had a better opportunity of studying the disease in otherwise healthy individuals. The type of the disease also changed somewhat towards the end of December, and showed on the whole a tendency to become less virulent; this feature has been maintained up to the present time.

As regards the incubation period, but little evidence is available, for the sources of infection were so general that it was rarely possible to determine the original focus in any given case. There are many features with regard to the infectivity of this epidemic which call for comment; for, while in the early influenzal stage the disease seems to be markedly infectious, yet directly bronchopneumonia supervenes its infectivity appears to be much diminished or lost altogether. This point is supported by the fact that hardly any of the sisters, medical officers, or orderlies in close contact with bronchopneumonic cases have contracted the disease.

Clinical Types.

The cases can be divided into three more or less well defined groups:

1. Catarrhal type.
2. Bronchopneumonic type.
3. Toxaemic type.

A large proportion give a history of a severe cold preceding the acute febrile period by a few days. Otherwise the onset of the disease proper is sudden, being marked notably by fever, headache, pains in the back and limbs, and lassitude. The more severe attacks were often ushered in by vomiting. The headache is generally frontal, and associated with pain in the eyes. I shall now describe the types of cases more in detail.

TYPE I: *Catarrhal.*—The febrile period usually extended from five to seven days, the maximum temperature being reached on the second day. It rarely exceeded 103° F., though in a few cases temperatures of 104° F. and over were met with. The temperature usually fell by lysis, though in a few cases, more especially in those treated with vaccine, the fall was more rapid. The pulse rate was increased, but rarely exceeded 116 to 120, whilst the respiration rate showed but little change. Tracheitis and pharyngitis were common, and associated with these was a dry and troublesome cough, with little or no secretion. No gastro-intestinal symptoms were present, except those usually associated with febrile disturbance—that is, furred tongue, loss of appetite, and constipation. After the subsidence of the fever the patients rapidly regained their normal strength, and post-influenzal debility was not a marked feature.

TYPE II: *Bronchopneumonic.*—During the early stages of the disease there was no means of distinguishing between Types I and II, except on the whole the onset in the latter type was liable to be more severe and the fever during the initial stages to be at a higher level. Usually it was not till the third or fourth day of the disease that one could classify any given case, when the temperature, instead of falling, would remain at the same or at a higher level, and the patient would be much more distressed. At the same time the pulse and respiration rates would show a greater deviation from the normal. Pain in the chest was a prominent feature, though physical signs at this stage would be absent, and they rarely appeared before the fourth or fifth day of the disease. The earliest signs usually detected were some fine sticky crepitations heard at the end of inspiration over one or both bases. A peculiar characteristic of these crepitations was that often they could only be heard once or twice during a single examination and would then disappear altogether. Once physical signs had appeared they became rapidly intensified with obvious crepitations, râles, and accentuation of vocal resonance. As compared with the slight physical signs during life, the striking feature *post mortem* was the wide extent of the pulmonary lesions. The sputum was at first very scanty, glutinous, and streaked with blood. "Rusty sputum" was rare. In the later stages, especially in those recovering, the sputum became abundant and purulent. After the development of bronchopneumonia the course varied, all grades of severity being met with. On the whole the course of cases with a severe onset, associated with vomiting, and those with high fever during the initial stages, was more severe and the prognosis correspondingly graver. There was a marked tendency for the bronchopneumonic process to spread throughout the lung, and perhaps affect the opposite side in similar fashion, so that during the course of the disease practically the whole lung tissue would become involved in the morbid process. Fortunately, in cases of this type, the portion of the lung first affected would rapidly resolve and be functional when other portions were being attacked. Many cases of this type recovered. Pleurisy occurred in a fair proportion of cases, but usually after the temperature had begun to subside. Its intervention did not appear to render the outlook more grave. Cases were seen in which during the early stages tracheitis was absent, but who, at a later date, developed bronchopneumonia, so that tracheitis does not appear to be an essential forerunner of the bronchopneumonic type.

TYPE III: *Toxaemic.*—This type is characterized by acute and severe onset, nearly always accompanied by vomiting, high fever, rapid pulse and respiration. The patient is flushed and anxious-looking, and obviously acutely ill from the commencement. The duration of this type is from two to five days, and they die usually exhibiting more a clinical picture of acute toxaemia than that of bronchopneumonia. In one case death supervened eight hours after the onset. During the later stages the flushing is replaced by a peculiar lilac coloured cyanosis[1] affecting the face and neck, but most marked over the lips and ears. This feature is frequently seen in severe cases of the second type, and once it has set in the prognosis is practically hopeless. Death usually supervenes within forty-eight hours. Apart from a general erythema and herpes, no rashes have been seen. Cerebral symptoms have not been commonly met with, and consciousness is retained almost to the end. Subsultus tendinum, with twitching movements of the hands and arms, have frequently been observed. Delirium was common during the earlier phases of the epidemic, but practically disappeared towards the end. It will be seen that the line of demarcation between the first and second types is by no means well defined.

I have detailed the clinical features of this epidemic in order to establish its identity with that encountered elsewhere as forming part of the pandemic, for when we come to study the bacteriology several points are found at marked variance with those of other observers.

Bacteriology and Vaccine Treatment.

Owing to the prevalence of other diseases requiring laboratory assistance for their diagnosis, but little bacteriological work could be done on influenza during the early phases of the epidemic, and consequently one could not concentrate on it until it had assumed a much more serious aspect. The primary work consisted solely of the examination of sputa from all types of the disease, and the preparation of autogenous vaccines for some few of the serious cases which showed a tendency to become chronic. During the course of these examinations it was observed that a Gram-positive strepto-diplococcus was almost constantly present—thus out of 300 sputa examined it was present in 95 per cent., and very commonly it was the predominant organism, so much so that cultures on suitable media would yield an almost pure growth.

From *post-mortem* specimens of lung this organism was again found in large numbers, sometimes alone and sometimes associated with a pneumococcus. The strepto-diplococcus was also found in the liver, spleen, heart's blood and kidney *post mortem*, and in the aspirated pleural effusions during life. It was also found in a subcutaneous abscess occurring in the course of the disease, in two cases, unassociated with any other organism. One fatal case,* which occurred recently, was complicated by surgical emphysema, and the strepto-diplococcus was obtained in pure culture immediately after death from the subcutaneous tissues affected.

Morphologically this strepto-diplococcus is identical with one found commonly in the nasopharynx of normal individuals, or in those with some mild catarrhal condition of the mucous membrane. Later, blood cultures were carried out in forty cases at all stages of the disease. In three the strepto-diplococcus was isolated, whilst in one other a diphtheroid organism was obtained. The last case was moribund when cultured, and the infection with the diphtheroid may be regarded as a terminal one. As regards the former, two of these cases were of the acute toxic type, and the blood culture was performed on the second day of the disease; one of these died forty-eight hours and the other seventy-two hours later. The third case from whose blood the strepto-diplococcus was isolated belonged to the second type, and eventually made a good recovery.

From these facts it was obvious that, whether one regards this strepto-diplococcus as the primary cause of the disease or not, it was certainly responsible for a very large proportion of the fatalities. For this reason, together with the very encouraging results achieved in the more chronic cases by the autogenous vaccine treatment—a vaccine composed of morphologically identical organisms—I ventured to suggest that a polyvalent stock vaccine should be given, tentatively at any rate, to a larger series of cases.

The first batch of stock vaccine used was prepared from strains isolated from sputa and lungs at autopsy; to this was added a third of pneumococcal emulsion also derived from lungs. Towards the end of October, 1918, vaccine treatment was commenced, and the preliminary results obtained in the early series of 20 cases was most encouraging. There were two deaths, one of which was complicated by acute bacillary dysentery, whilst the other was found *post mortem* to have suffered from miliary tuberculosis. Tabulated in this manner they gave the following results:

Number of cases	20
Deaths	2
Recoveries	18
Mortality	10 %

Cases treated on symptomatic lines during the same period at the same hospital gave the following results:

Number of cases	43
Deaths	15
Recoveries	28
Mortality	35 %

Whilst fully acknowledging that statistics derived from such a comparatively limited series are liable to be misleading, it is necessary for me to emphasize that this line of treatment was carried out on Indian soldiers without any selection being made. It was made a routine that every third case diagnosed in the pneumonia ward and belonging to my second type received vaccine treatment.

Before commencing treatment smears of the sputum were examined to determine the presence of the strepto-diplococcus. The scheme of dosage employed in these early cases was as follows:

Initial dose	5,000,000
Interval 48 hours.	
Second dose	10,000,000
Interval 48 hours.	
Third dose	15,000,000
Interval 72 hours.	
Fourth dose	20,000,000

This scheme had to be modified occasionally. No marked reactions or untoward symptoms manifested themselves as a result, but on the contrary the patient usually improved clinically shortly after the commencement of treatment. I wish especially to call attention to the definite drop in temperature which took place after each injection. These results appeared to me to justify a much wider application of the vaccine treatment, and it was therefore provided to the casualty clearing stations and stationary hospitals in the district in which I was working.

Although for obvious reasons it has been impossible to keep accurate statistics throughout the epidemic, nevertheless all the medical officers who have been employing the vaccine have reported favourably upon it. Within the last two months the scheme of dosage has been modified, the initial one being increased to 10,000,000 cocci, to be followed after an interval of forty-eight hours by 20,000,000. Further increases are of 10,000,000 per dose. Provided that no untoward symptoms are observed, the intervals as described in the first scheme should be observed.

Much larger doses have been given without any untoward results. One medical officer reported that he had administered 50,000,000 to an apparently moribund Egyptian patient, who ultimately recovered. Other cases seemed to indicate that still better results might be obtained with a higher dosage. It has only been in a minority of cases that the vaccine does not appear to influence the course of the disease; but it is without value in the acute toxaemic forms.

In order to obtain the best results vaccine treatment must be instituted as early as possible, and I have strongly advocated its use in the early catarrhal stage. That this view has some justification is shown by the fact that a much smaller proportion of cases thus treated proceed to the bronchopneumonic stage.

The physical signs of pulmonary complication do not usually appear till the fourth or fifth day of the disease, so that vaccine treatment should not be delayed till these signs appear; the essential point, to my mind, is to immunize the patient against the strepto-diplococcus before actual consolidation has taken place, for when audible signs are present it indicates that considerable pathological changes are already present in the lung, and it may be too late to produce an effective immunity. Severe cases and those tending to become chronic should be treated with an autogenous vaccine, the stock vaccine being reserved for primary usage, pending the preparation of an autogenous one.

It is advisable to examine Gram-stained films for the strepto-diplococcus in all cases where vaccine treatment is contemplated and sputum is available, for in a small minority it plays little or no part in the pathological process.

Morphology and Cultural Characteristics of the Strepto-diplococcus.

Sputa examined from early cases of the disease show large numbers of Gram-positive, non-capsulated diplococci, arranged in chains of varying length, composed of four to twenty or even more cocci. In fresh specimens and young cultures the organism is uniformly Gram-fast, but in older sputa and cultures, as well as smears obtained from the tissues, the diplococci are liable to lose their staining properties. In addition to Gram, it stains well by all simple stains. The size of the organism and the length of the chain it forms vary somewhat in culture on different media, but this strepto-diplococcal arrangement is a constant feature. Involution forms are common, especially on solid media.

The organism is easily isolated from sputa by plating on plasma-glucose-agar, and it is possible to obtain an almost pure primary plate from fresh sputa in early cases. The colonies are small, grey, translucent, circular in outline, and rather flat-topped. It grows poorly on ordinary media, but freely on those containing glucose, with plasma or serum. Unless subcultured every twenty-four hours it rapidly dies out, and even then it is most difficult to keep it alive for more than six or seven days at a time, for each subsequent subculture gives a less vigorous growth. The best medium for this purpose is apparently 1 per cent. glucose-serum broth.

The reaction of twenty strains corresponding morphologically to this description has been tested against the following sugars and alcohols; in the main the reactions are constant, though differences in the degree of acidity are sometimes marked.

Glucose	Acid	Dulcite	Acid
Lactose	0	Mannite	0
Maltose	0	Milk	Acid and clot
Saccharose	Acid		

On the whole strains isolated from blood and pleural effusions produce more strongly marked reactions than those isolated from sputa. Thus little or no clot production in milk was observed in strains isolated from sputum, though this was a marked feature in strains isolated from other fluids. All strains were markedly haemolytic.

The strepto-diplococcus proved to be non-pathogenic to all the available laboratory animals, guinea-pigs, rats, and rabbits.

*Both these cases were investigated by my colleague, Captain J. Anderson, R.A.M.C. The latter was treated with intravenous injections of eusol.

One of the most notable bacteriological differences between the epidemic occurring in Egypt and Palestine and in Europe has been the almost complete absence of bacilli corresponding to the Pfeiffer type. During examination of film preparations of sputa at all stages of the disease, Gram-negative micro-bacilli of Pfeiffer type were only observed in twelve cases, and in three cases only has anything corresponding to the *Bacillus influenzae* been isolated in culture, although media recommended by observers in England as specially suitable for the isolation of this micro-organism, including that of Matthews,[2] and the "K"[3] medium quoted by Fildes, Baker, and Thompson, have been repeatedly used. I find also on inquiry that these results as regards the almost complete absence of *B. influenzae* correspond with those of other laboratory workers in the district.

Many *post-mortem* examinations have been made, but as results coincide with those detailed by other observers, they have been omitted from this article. In this connexion I would like to thank Major P. H. Bahr, D.S.O., R.A.M.C., for his assistance and many valuable suggestions.

Conclusions.

1. There is no valid reason for assuming that the primary cause of influenza in Egypt and Palestine differs from that of the recent pandemic.
2. There is no justification for regarding *Bacillus influenzae* (Pfeiffer) as the primary cause.
3. From the work of various investigators, it is more reasonable to regard both the influenza bacillus and the strepto-diplococcus as secondary invaders, the former being the predominant organism in Europe, the latter in Egypt and Palestine.
4. In this case it is more than possible that the primary etiological agent is ultramicroscopic and is a filtrable virus, which renders the individuals infected hypersensitive to organisms which formerly only possessed a low degree of pathogenicity.

It is hoped that the favourable results achieved by the vaccine treatment will dissipate—in part, at any rate—the diffidence felt by many medical men to the employment of vaccine in acute pulmonary cases and will stimulate further investigations on this branch of therapeutic bacteriology. Work is now being conducted with a view to producing an antiserum in horses to this strepto-diplococcus.

References.

[1] Abrahams, Hallowes, and French: *Lancet*, January 4th, 1919. [2] Matthews: Ibid., July 27th, 1918. [3] Fildes, Baker, and Thompson: Ibid., November 23rd, 1918. See also W. F. T. Haultain, BRITISH MEDICAL JOURNAL, April 26th, 1919, p. 517.

AN ADDRESS ON GOITRE.*

BY

H. J. BOYD, L.R.C.P., L.R.C.S.,

CHAIRMAN OF THE BELFAST DIVISION OF THE BRITISH MEDICAL ASSOCIATION.

It is a very difficult thing for a man in an ordinary country practice to write a paper that would interest any number of the medical profession. He is in a totally different position from the surgeon, the consulting physician, or the bacteriologist. If he meets with a very interesting case—occasionally he does—he rarely if ever has anyone to consult, nor can he compare notes with any other practitioner.

A disease the frequency of which has been puzzling me for some time in a portion of my neighbourhood is goitre, and I thought an account of a few facts I have noted might not be inopportune on this occasion. I do not claim to have discovered anything new either in cause or treatment, but I think there are some differences between the symptoms in the majority of the cases I have met with and what I have seen described in books, notably in the time of onset and the proportion of males and females affected.

In July, 1918, there was a garden party at Hillsborough for the purpose of raising funds for a neighbouring church, and a number of young women from a district, to which I shall refer later, were present. In the evening I happened to have a good view of them as I occupied a seat on a platform facing the audience. In the front row there were twenty-two young women, and out of these I counted sixteen with enlarged necks. I drew the attention of three persons who were sitting beside me to what I had observed, and asked them to tell me how many they thought were affected. They all arrived at about the same number.

I do not, however, wish it to be believed that anything like 70 per cent. of the young women are affected, but on this particular occasion they happened to be congregated.

Twenty or twenty-five years ago goitre was almost unknown in this district, but at the present time I know of and have seen between sixty and seventy cases. It is quite possible there may be a few more, as I am rarely consulted about it unless there arises some difficulty in breathing or swallowing. All the cases, with one exception, are of the female sex, and in over one half the right side of the gland is larger than the left. In no case have I seen the left larger, whilst, in the only male case that I know, the left is the side most affected. Why the left side should be larger in the male and the right in the female is an interesting problem; it seems to indicate that sex plays an important part in the susceptibility of different lobes of the thyroid to disease.

The gland in most cases begins to enlarge when the girls are about thirteen or fourteen. Now Dr. McCarrison in his book says that school children are more susceptible than adults when they are subjected to goitrigenous influences, and that the most susceptible age is 9 in the case of boys, and 10 in the case of girls, and that up to the age of puberty both sexes are affected equally. I do not know of a single child attending school showing any symptoms of the disease. I have spoken to several national school teachers on the subject, and in no case have they noticed a swelling or prominence in the necks of any of the scholars. The majority of children leave these schools when they are about thirteen or fourteen years of age.

Dr. McCarrison also says that in the localities where goitre is not supposed to be endemic the thyroid enlarges during pregnancy in nearly half the cases. I know of two cases that developed in the past year during pregnancy. The enlargement was first noticed by the patients about the fifth or sixth month. In one of these cases the enlargement was much the same when I saw it last, about four or five months after the child was born. In the other it had decreased; she has a sister with a fairly large goitre of sixteen years' standing, and their mother informs me that she herself had one which disappeared about twenty-two years ago, shortly after her last baby was born.

I see from several books I have consulted that defective or improper food, insanitary dwellings, bacterial and other toxins, infectious diseases, constipation and intestinal stasis, fright, mental worry, consanguinity, and heredity, are all given as exciting causes.

The majority of these causes are out of the question in this locality. There is not much wrong with the food; the people are as well fed—better, I believe—than ever they were. The dwellings are far more sanitary than they were thirty years ago—the old mud walls, thatched roofs, earthen floors, and small windows that did not open, are things of the past; and the filthy cesspools and stagnant water holes have almost disappeared. There had been no serious epidemics before the late outbreaks of influenza. Intestinal toxaemia is, I suppose, much as ever it was, while constipation is not a common condition in girls of 13 or 14.

The water supply in the labourers' cottages built by the rural council is different. Before these cottages were built shallow wells, from which the water could be lifted with a can, supplied the drinking water. Now a deeper well, with a pump, is the rule, and it is quite possible that the water now used is not the water originally supplied, but comes from some distant and polluted source. We have a few cases in the village of Hillsborough where the water supply is almost the same as it was forty years ago. The majority of the people are supplied from pumps. I have had the water from these analysed at various times, and several of the samples were certified to be contaminated with sewage.

The district in which the disease is most prevalent, and where the girls I saw in Hillsborough came from, lies along the banks of the Lagan Navigation Canal and the river Lagan. It is low lying, from 110 to 150 feet above sea level, and is bounded on the north and south by fairly

* Delivered at the annual meeting of the Belfast Division, June, 1919.

high hills; the northern, in County Antrim, are composed, according to the geological survey map, of basalt, chalk or limestone, with flint and red marl. On the southern side the hills are upper silurian with an outcrop of rhyolite and patches of thick and thin greenish grit, with beds and layers of grey slate and also yellow and brown sandstone. The valley itself lies over new red sandstone, with a few thin bands of white earthy magnesian limestone. Thus we have limestone on the one side, and underneath it magnesian limestone, which is repeatedly associated with goitre.

Bircher considers that the extinct flora and fauna of limestone rocks provide the organic constituents which help to produce goitre. Dr. McCarrison's explanation is that "these rocks are amongst the most porous, and most freely cultivated and inhabited, and that their porosity favours the excitants of the disease to unprotected water supplies. Water derived from such rocks may contain an excess supply of lime, the ingestion of which may throw an additional burden on the function of the thyroid. The presence in the soil of decaying animal and vegetable matter may convert any soil into a suitable habitat for the contagium vivum of the disease."

It is a common idea in my neighbourhood, especially amongst the elder women, that the wearing of light blouses by the young girls and the exposing of their necks in all weathers are the principal causes. There is a possibility that an alternating increased and decreased blood supply might be caused by running in and out of doors in cold weather.

There are three cottages in this district, built several years ago by the district council. They are good cottages, kept clean, and are apparently sanitary. They were built on new ground where there was no probability of any contamination from sewage. The gardens, however, are close to the house, and as these are manured there is a possibility of some deleterious matter coming from them. The well, on the other hand, is fairly deep, and I am informed the spring comes from below. These cottages are supplied by one pump. In two of them eight cases of goitre developed. The original occupiers of the other cottage have left. They were, however, oldish people beyond the susceptible age, so I did not take the trouble of looking them up. The present occupiers are a man and his wife with a young family. So far none are showing any symptoms.

I got the district council to have the water from this well analysed, stating that I suspected it of producing goitre. The report I got from the analyst was: "It is a satisfactory water, quite safe for domestic use; and, although I would classify it as a hard water, I could not say it would be the possible cause of goitre."

I afterwards gave Mr. Kirk, who noticed the goitre in one of these houses, a sample from the same pump. He very kindly got it examined by Professor Symmers, who declared it to be full of micro-organisms very similar to those McCarrison describes in his book. The material excavated from this well was principally sand of a greyish-yellow colour, and the water at times had so much suspended matter that it had a slight tinge of that colour.

This well has not been used for four or five months. The occupants carry from another well a few hundred yards distant, and boil all the water used, and at present in every individual case the size of the neck has greatly diminished.

There were two deaths in the past year amongst goitrous patients. One died from tuberculosis, and I noticed that, although before death this young woman had gone to a mere skeleton, there was no diminution in the size of the goitre. It became more prominent, though I do not think there was much increase in size; it was more noticeable owing to the wasting of the other parts. She had diarrhoea for a long time, continuous sweating, and constant thirst, and, in consequence, drank large quantities of water, which, if it produced the disease, probably kept it up to its original size.

The other death occurred in an exophthalmic case, which seemed an ordinary case for years; but within nine months of her death the protrusion of the eyeballs and the palpitation of the heart first became noticeable. The pulsations were visible over the whole chest, and could easily be seen when covered with the bedclothes. I have seen the bed shake and could hear the sounds of the heart at a distance of nine or ten feet from the patient. Her mother informed me that frequently at night when all was still she could hear it distinctly in the next room. At present two of her sisters, one 16 and the other 14, have ordinary goitres. In the case of the elder it is fairly prominent.

I know of five mothers suffering from goitre who have grown-up families, and in every case some of the daughters are affected. This at first sight looks as if inheritance played an important part in the disease, but it is quite possible that the source from which both mother and daughters got the disease was the same. Again, it is also possible that the mother herself may be the carrier and may contaminate the food or drink in some unknown manner. I know of one case in which a woman from Cookstown settled in my neighbourhood. She had a large goitre when she came. Since then her daughter has developed one. The original cause could not be guilty in this instance.

When two or three girls are affected in one house I have noticed that the one who drinks most water has generally the largest goitre, from which it might be concluded that water is the important factor, and that the growth is in proportion to the material supplied. On the other hand, some are showing the enlarged gland who declare they never taste water unless in the form of tea, coffee, or cocoa, in all of which beverages the water has been boiled. If the statement of these girls can be relied on—and why should it not?—it would seem that there must be some other vehicle than water which conveys the infection, or, if it is only from water, that the micro-organism causing the disease must be capable of surviving a few minutes' boiling. If not, the old theory of mineral constituents held in solution or suspension naturally occurs to the mind.

I have kept an eye on the domestic animals of the neighbourhood—horses, cattle, dogs, and cats—but so far I have never seen the slightest trace of goitre in any of them.

About three weeks ago I was attending in her confinement a woman who suffers from goitre. Immediately labour began she had great difficulty in breathing which she compared to a cord constricting her neck. This was so severe that at times I was greatly alarmed, and she herself was so much frightened that she never noticed her pains. After the baby was born the breathing improved, and the next morning all difficulty had passed away.

Treatment, as a rule, is not very satisfactory. It is generally tedious. The patient gets tired or careless or gives up hope. Young women object to painting their necks with iodine or blistering with red iodide of mercury. They may take iodine or potassium iodide internally for a time, but will not persist long enough for the drugs to produce much effect. Thymol I have tried frequently, but have never seen any results from it. Thyroid extract I have certainly found of value, and I frequently combine it with the iodides. I notice that when once the gland begins to decrease in size the diminution generally goes on even after the treatment is stopped.

The cases, if they come early, are, I believe, quite amenable to treatment; at least I have found it so in several cases. Whether the decrease is due to the medicine, the boiling of the water, or getting it from another well I cannot say—possibly a little of all combined.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ACRIFLAVINE IN TREATMENT OF GONORRHOEA.

DR. WATSON, in a memorandum in your issue of June 28th, offers a few suggestions as to the best method of diagnosing anterior gonorrhoeal urethritis and states that a considerable percentage of error must occur, the disease having spread to the posterior urethra. In my experience the number of days since the appearance of the discharge cannot be relied upon in the differential diagnosis, as in some cases the posterior urethra is infected at a very early date; in a few cases which have received little treatment it escapes. Frequency of micturition may not be present even when the posterior urethra is affected, and when present may be due to other causes. The two urine glass test is open to fallacies. It is better in cases of doubt to

wash out the anterior urethra with cold sterile water until it returns free from all discharge or threads. The urine then is passed in three lots, the first giving the contents of the posterior urethra, and the second an index as to the condition of the urine in the bladder.

The prostate is then gently massaged and the third urine examined; this is an old method, and if carried out carefully, the exact extent of the disease can be arrived at.

I agree with the suggestion of using urethral vesical lavage in all cases in clinics, but when the disease is limited to the anterior urethra and individual attention can be given to the case, I limit irrigation to the anterior urethra.

If in addition to the local treatment large quantities of alkalis are taken internally and the patient advised to rest, at least 50 per cent. will escape posterior infection. I have found that if the treatment is used twice a day the results are as good as when more frequently applied, and the patient is more inclined to continue the treatment.

In many cases of gonorrhoea treated with the old remedies the gonococci disappear before the end of three weeks. In the cases recorded by me to which Dr. Watson refers posterior urethritis was ruled out by the method recorded above and a cystic gland by urethroscopic examination. I am now using acriflavine in the strength of 1 in 1,000 with a 2 per cent. alkali, and the results appear to be favourable, the purulent discharge and cocci disappearing in 50 per cent. of the cases within the first fourteen days.

London, W. J. Armstrong.

Reviews.

ARMY MEDICAL ADMINISTRATION.

During the course of the war a great deal of criticism, constructive and destructive, was directed towards the administrative methods of the Army Medical Service, and our own columns have frequently contained notes and articles pointing out the defects as well as the successes of that service. In his most recent book, *A Vision of the Possible*,[1] Sir James Barrett, who has been a prolific writer on war topics in the last two years, sets out the conclusions he has reached, after three years' service in Egypt, as to the methods employed, and where, in his opinion, they need revision. A visionary is popularly supposed to be highly unpractical and to lose sight of detail owing to his largeness of view, but the author shows that he has a keen eye for detail. He takes pains to make it clear that no criticism of individuals is intended, for individually the medical officer, no less than the combatant, played his part to the maximum of his personal effort, and helped the nation to weather a storm which threatened disaster.

It must not, in any criticism of its methods, be forgotten that the Army Medical Service, like other military branches, had to expand at an unprecedented rate to an unforeseen extent. This made it necessary to obtain the help of men (of whom the author is careful to say he was one) with no previous knowledge of army administration. Much time and energy had consequently to be devoted to the education of the incoming man. As was inevitable, some of the criticisms heard were levelled at methods which seemed obsolete to civilians who were unaware of the underlying causes from which such methods sprang. An order often appears absurd to those to whom the reason for the order is not revealed, and if his suggestions are to be useful the critic must know something of the history of the Army Medical Service, as well as of the constitution and administration of modern armies.

Sir James Barrett in his preface expresses the opinion that the conditions under which a R.A.M.C. officer works might, owing to the unlimited scope and the freedom from financial worry, be ideal, and that constructive criticism should aim at contributing to the attainment of this end. In the first section he narrates his personal experiences as consulting oculist and aurist in Egypt. The forces there, as elsewhere, contained hundreds, if not thousands, of men who were rushed into the army suffering from minor ailments of the nose and ear. Conditions of service aggravated these complaints, and often without aggravation afforded a pretext for going sick. An analysis of 1,474 cases shows that in a very considerable proportion the condition must have been of long standing. The problem of the soldier with "running ear" is difficult. The patient is a nuisance to his comrades and a constant perplexity to the regimental medical officer, who finds it almost impossible to give an accurate prognosis. Such cases form an appreciable part of the floating hospital population which travels constantly up and down the lines of sick evacuation, being temporarily improved and returned to duty, only to go sick again on slight pretext. Careful weeding by an expert is necessary, and grading of men for the varied types of duty; for this specialists must be appointed at the beginning of a war, so that man-power may be conserved and in a national emergency every man may "pull his weight" according to his physical ability. As organization developed in Egypt such a classification became standardized; further, much useful treatment was carried out in the forward area and only serious cases were sent to the base. An interesting circular memorandum as to the methods of treatment to be adopted in dealing with chronic otitis is reproduced in the book; the author is enthusiastic about its results, which led in many cases to long-standing disease being overcome and to the retention of men with the troops in the line. The problem of deafness was similarly attacked, and with like happy results. Impaired hearing is not difficult to simulate; when genuine it is a bar to front line work, where sentry duty demands acuity of hearing. Here again an experienced medical officer is needed to classify the cases.

On these examples of what was accomplished Sir James Barrett founds an argument for the early appointment of specialists in other branches—for example, for cardiac conditions, venereal diseases, etc. He claims that the work of the heart specialists resulted in the practical elimination of D.A.H. as a disability, largely because the issues were clearly explained to medical officers, whose enthusiastic co-operation was thus aroused. This is an important statement, with very wide bearings. In dealing with men of intelligence, such as medical officers, the rationale of the procedure must be explained if the best results are to be attained. A curt order, to the underlying reason for which the recipient has no clue, does not promote intelligent co-operation. Where a certain course is ordered in dealing with special diseases, explanatory memoranda, which need not be lengthy, are of the greatest value in securing that the instruction shall be carried out in the spirit as well as the letter.

In Section II a voluminous account is given of the work and procedure of medical boards. Probably no institution has come in for more criticism throughout the war. To board a man efficiently is no easy task; it requires an understanding of the psychology of the case as well as a mere estimate of physical efficiency. What will effectually bar one man from "carrying on" will be made light of by another; therefore the man's willingness has to be estimated as well as his condition. The members of a medical board need to be trained in the work, and should also be able to refer for an opinion to those who have special knowledge of certain disabilities, particularly those of the heart, the nervous system, and the special senses. To employ on boards, as has happened in the past, men who have been found unsuitable for hospital work is to court trouble. In the war areas the boards were faced with an additional difficulty in that the medical history sheet, which in peace is kept up for each man, was abolished, and no record of the man's medical history was available, beyond a few entries in his pay book as to antityphoid inoculation and a possible refraction test. To multiply these entries was impracticable owing to the labour of copying each time a new book was issued, and to apply to the D.A.G. Casualties involved a long delay. It is interesting to note that in Egypt the practice of entering the classification of a man's grade into his pay book was adopted, with the result that much time was saved. In the early stages standards of efficiency were not definite and had to be evolved or altered. This evolution as it occurred in Egypt—and experiences in other theatres of war were similar—is outlined by the author, who acted as president of the Standing Medical Boards; the complete memorandum of instructions for boarding,

[1] *A Vision of the Possible: What the R.A.M.C. might Become.* By Sir James W. Barrett, K.B.E., C.M.G. London: H. K. Lewis and Co. (Pp. 179. 9s.)

which was issued to every medical officer, is reproduced in the book, and should be found of great value for future guidance. The scope of the boards steadily widened, and ultimately included classification, invaliding, pensions, commissions, repatriation, and special inquiries. So valuable was their work that at the end of 1917 the D.M.S., it is stated, estimated that directly or indirectly a division had been added to the force in the E.E.F. as a result. One concrete example of classification is telling. "Base details" in Cairo and Alexandria were in 1917 very enthusiastic about football. All players were therefore reclassified, and as a result a substantial number were returned as fit for front line duty. This was a gain not only in men, but in moral, for it undoubtedly had a good effect on the men in the fighting zone who naturally "grousèd" at fit men being retained on "cushy" jobs at the base. In six months of 1917 nearly 9,000 men were boarded in Egypt, and the results are set out in tabular form; numerous other statistical tables are included. These are well worthy of study by military medical administrators.

The chapter on standards of vision is of interest. The pre-war standard was early discovered to be too exacting, and was revised by the War Office; in Egypt, later on, it was made even lower, so that $\frac{6}{24}$ in the right eye, with or without glasses, provided the man was not blind in the left eye, was regarded as sufficient for front line duty. Trachoma was a problem of little magnitude, but "experiences in Egypt have shown that with an Anglo-Saxon population the risk of spread is negligible." This statement should be of interest to our immigration authorities.

Before quitting this subject it should be noted that it is important that boards responsible in England for classifying drafts should have practical and personal knowledge of conditions overseas; the same standards of physical efficiency should be applied throughout.

An important subject is raised in the discussion on the relation of the Red Cross to the R.A.M.C. Whether the great voluntary organization should in war be merged in the Army Medical Service, as is the case in Japan and largely in America, or whether it should be maintained separately, is a matter for careful discussion. Sir James Barrett appears to favour the former course, and in this he will have many supporters who have served overseas. It is doubtful whether it is wise to have hospitals maintained by voluntary effort working alongside those under complete army control; many would agree that the purpose of the Red Cross is solely to supplement existing army resources and not to maintain kindred establishments.

On the subject of consultants the author covers much of the ground traversed in these columns recently, and arrives at substantially the same conclusions. On one point his brother consultants will hardly agree with him and that is, his order of precedence. He places the consulting dentist at the head, the oculist and aurist next, the surgeon and physician coming last in the hierarchy.

The summary is interesting reading and sets out plainly what many must have felt. In the first place, an officer must not become the slave of the administrative shibboleths, and regulations are not to be regarded as sacrosanct and incapable of modification. Secondly, promotion must not be confined solely to the channel of administrative capacity, but must be equally possible through clinical merit and through knowledge of preventive medicine. Thirdly, the extension of civilian advisory boards to each command is advocated. On the vexed question of whether the medical service should be removed from the control of the "A" or Adjutant-General's branch, the author has weakened from his previous firm advocacy of this change, his reason being that few medical men have sufficient breadth of view. On this point we differ from him and maintain that freedom from "A" control would materially have helped the service in the recent war. The education of civilian medical officers in army routine, the importance of preventive medicine, and the necessity for clinical medicine and medical administration working hand in hand, are dealt with. Finally, the author asks for a Royal Commission to inquire into the workings of the service and submits a series of questions for its consideration, suggesting the widening of the scope of the R.A.M.C. and further use of its magnificent matériel in peace as well as (*pace* the League of Nations) in war.

As a stimulant to thought the book should be read by all interested in military medical administration, and who of us does not now think that he knows a vast amount on this subject?

ORTHOPAEDIC SURGERY.

DR. ROYAL WHITMAN'S *Treatise on Orthopaedic Surgery*[2] is one of the standard textbooks on the subject and the sixth edition will be generally welcome. In the preface it is stated that the aim of the author is to emphasize the purposes of orthopaedic surgery, which are to prevent or correct deformity and to preserve or to restore function. The most notable change in the present edition will be found in the final chapter, which treats of military orthopaedics and the early development of practical reconstruction. In the chapter on diseases of the nervous system Dr. Whitman gives some interesting data concerning the great epidemic of anterior poliomyelitis in New York City and State in 1916. In this, as in previous epidemics, the mortality was higher than it had been among sporadic cases. For instance, in the five years 1905–09 the mortality among 7,103 cases in New York City was only 7.4 per cent. In the 1916 epidemic the mortality among 8,991 cases was 27.2 per cent. The suggestion is that an epidemic is associated with, if not caused by, increased virulence of the poison. The age incidence was much the same as that of previous records.

To a great extent the United States military authorities followed British practice in forming an orthopaedic department of military surgery, but under that department was included upbuilding as well as repair, for "under the system of universal conscription a large proportion of those who would formerly have been rejected are retained, with the expectation that they may be brought into condition by training in the camps." But besides those who might be brought up to the normal standard, recruits were accepted for special and limited military service who suffered from quite severe deformities, such as lateral deviation of the spine of less than 3 in. from the mid-line. About 80 per cent. of the cases of weak or strained back and weak or flat foot were cured by the treatment in the camps, and were finally accepted as fit for full duty. The courses of treatment were strenuous and life in the camp was made less pleasant than in an ordinary camp, so that there was no inducement to prolong recovery.

Dr. Whitman emphasizes the differences between the pathological flat-foot and the normally flat or low-arched foot; a man with the latter condition may be quite fit for all military duties and need no treatment.

The treatment of gunshot fractures and of pseudarthrosis and the preparation of amputation stumps receive due attention, and Vanghetti's methods are described. In this connexion it would seem from most recent developments that the tunnelization methods so much talked of in Germany and practised by Sauerbruch and his school are likely to be abandoned, in this country at least, in favour of other forms of motors where an operation of this type is considered desirable. The various forms of motors are illustrated by Dr. Whitman, but he does not record any personal experiences with the method. It may be hoped that we shall soon have the benefit of transatlantic experience of these operations.

The section on the treatment of injuries to nerves is adequate and well illustrated, as is that on attitudes of election when ankylosis of joints is inevitable, a subject of much practical importance. Some pages on curative workshops, vocational training, etc., conclude the book. We note with satisfaction that Dr. Whitman and most American orthopaedic surgeons have now adopted the diphthong "æ" in place of the "e," which was originally imported into the United States from France. They have thus removed the ground for the popular etymological association between "orthopedic" and "pes."

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[2] *A Treatise on Orthopaedic Surgery.* By Royal Whitman, M.D., M.R.C.S.Eng., F.A.C.S., etc. Sixth edition, thoroughly revised. London: Henry Kimpton. 1919. (Roy. 8vo, pp. xii + 914; 767 figures. 36s. net.)

AT the sixty-ninth annual commencement of the Women's Medical College of Pennsylvania, held at Philadelphia on June 15th, degrees were conferred on seventy-eight candidates.

MOTOR NOTES FOR MEDICAL MEN.

BY H. MASSAC BUIST.

THE LOT OF DOCTORS WITHOUT CARS.

WHILE the technical motor press has been issuing weekly numbers of at least pre-war proportions and chiefly concerned editorially with descriptions of so-called 1919 chassis, the fact is that the labour and other troubles have prevented such vehicles issuing in standard form in any appreciable quantity. As the facility of motoring does not consist in providing the public with reading matter about cars alleged to be in process of manufacture or supposed to be on the market, but in providing the actual car ready for service, one has reluctantly come to the conclusion that it is quite idle to give any more attention to the announcement of programmes for the time being.

But inasmuch that there is no gainsaying that the motoring lot of the medical man, especially if he sold his car on joining the service, is far from happy, it becomes a duty to give thought to the possibility of some scheme for providing essential facilities to those whose work is vital to the well-being of the community at large. It is easy to summarize the various directions in which a solution of the passing trouble cannot be sought. Allowing for happy exceptions, in the main the acquisition of used cars is not a satisfactory matter for the medical man from the mechanical point of view, while from the financial standpoint it would be grossly inadvisable, in that, though prices are not as wildly inflated as they were, nevertheless they are nothing like back to normal. It must be had in mind, too, that price fluctuations react always in exaggerated fashion, so that when the price begins to drop second-hand cars will fall far below their proper value when the inevitable occurs, as it must within twelve months.

As medical men cannot be numbered among the profiteers, the notion of risking a heavy loss in the way of depreciation of capital expenditure to solve a temporary problem is not to be contemplated. Besides, already here and there one hears of folk getting real bargains in used cars; consequently it is not at any given time possible to determine what is a fair current price of such an article. For instance, the other day I came across a man who acquired a Morris-Oxford light car which had not done more than 1,200 miles, and was in excellent condition, for £100; whereas the majority of light cars of that and other makers are commanding at least their original cost and some of them more.

TEMPTING PRICE SCHEMES THAT DO NOT MATERIALIZE.

The prices of such few examples of the current season's British production as are issuing are wellnigh prohibitive to the average medical man, apart from the fact that it is next to impossible to get delivery, as little or no reliance can be placed on promises as to dates. The very prices fluctuate, as they must necessarily do, for the Government is striking at the roots of industry in its dealings with the coal miners, who have lost the sense of the relation of the part to the whole—otherwise of themselves to the State and of this country to the rest of the world.

The only fresh point of the situation since last it was touched on would appear to be that the speculating company promoter sees a golden opportunity in the present troubles to float enterprises with large capitals with nothing more than the scheme of a car on a piece of paper, and the statement of the price at which it is to be marketed—which, seemingly, is not that at which the thing can be done, but that at which the public would like to be able to obtain a vehicle of whatever kind may be in question. Therefore medical men may avoid being disappointed if they will not allow themselves to build false hopes on propositions of this character. The most I have discovered about so-called mass-production propositions of this caste to date is that, after going to allotment, hasty endeavours have been made to get together at least ten chassis in a hurry. If the public knew the little backyards and places where the parts and bodies are produced to serve such shifts, there would be no more chances of success for ventures of this sort. The medical man will not help himself by believing that, because he has placed an order, as numbers have done, satisfactory vehicles of the kind specified will materialize to schedule at the prices contracted for.

CAUSES OF DELAY.

As for the established section of the industry which has goodwill to lose, it is frankly unable to keep to programme either as to price or deliveries. Under a hundred heads its cost factors alter every month. It is rarely free of labour disputes in less than 5 per cent. of the total number of trades concerned in car production. Of course, it only needs a hold-up in one department to bring to a stop the production of a whole factory. Moreover, apart from the fact that the accessory industries are equally handicapped, and are therefore in the main also behind with deliveries, thereby constituting another cause of delay to the car-makers' output, the quality of the work of many of the key industries concerned with automobilism, and whose products have also to be purchased at post-war prices, is quite impossible. Take the foundry trade. In one case I know of, a British firm has hundreds of thousands of pounds locked up in cars that cannot be issued for lack of engines because it had to reject no fewer than 85 per cent. of the cylinder castings it has received. In another firm rejections under this head have averaged over 60 per cent.

GOVERNMENT PROFITEERING.

One does not draw aside the curtain to the medical profession for the purpose of creating depression, however, but merely because we must know the worst before we can see what is the most acceptable remedy that can be suggested at the moment. The Surplus Government Property Disposal Board has lately been advertising practically everything save motor cars for disposal; yet there are still large numbers of middle-sized vehicles to be disposed of and, perhaps, a few small ones. The trade seems to have had the opportunity of snaffling most of the latter when many Singer light cars were sold some months ago. These are really the only sort of war cars suitable for the average suburban or country practitioner, in that, with the exception of a certain number of Rovers, bought at one period for the use of the Royal Naval Air Service, a somewhat larger size of car, such as notably the 16–20 h.p. Sunbeam and the 25 h.p. Vauxhall, they are the minimum types that were needed to stand up to the work of light transport in the war zones. Though they are, perhaps, a degree too large for the ordinary medical man, provided he could acquire them at a reasonable price, it might pay him better to make use of such vehicles for the time being.

Unfortunately the Government seems to have gone in for a profiteering policy of its own in regard to disposing of motor vehicles, having actually sold one car requisitioned at the beginning of the war at double the price it gave for it then, yet the car has done four and a half years' service in the interval. The defence of the department concerned is that it took its chance of market fluctuations, and the value of the article having risen in the interval, it stands to gain in this instance. In face of the fact that this is the only Government department that ran itself from the point of view to profit and loss, and not for the sole purpose of defeating the enemy, the medical profession, which has done all the sacrificing and no profiteering, has happily a lever to use with the Government in demanding reasonable consideration at this moment.

HOW THE AUTHORITIES COULD HELP DOCTORS.

At the end of the war the big motor fuel distributing companies, which were completely disorganized, were short of lorries for deliveries. The British manufacturers with whom they had placed orders were wofully behind programme owing to labour troubles. In face of threatened strikes, however, it was essential to ensure that the motor vehicles of the country would be usable in the event of a hold up; therefore, the Government gave facilities to the petrol distributors to acquire large numbers of lorries no longer needed for the war. Some were new, some were used. Between them the emergency was satisfactorily provided for.

Therefore, the obvious argument is that, motor vehicles being essential to the work of the medical profession and its services essential to the well-being of the community, the Government must extend to the medical profession special facilities for acquiring all motor vehicles which it has to dispose of which could be in any way serviceable to doctors. All it has to do is to rule that they are to have the first opportunity of buying all such vehicles, instead of

their disposal being, as it has been to date, a golden opportunity for motor dealers to line their pockets.

OUTLINE OF A SCHEME.

If it is argued that it is impossible for the Government to deal with doctors individually, the answer is that the medical profession could be advised through its representative body of the total number and types of likely cars to be disposed of month by month and the prices required for them. Individual medical men could advise the Association, which could place its order in the gross. The cars could be grouped as new and those that have seen service but are properly repaired and in usable condition. Inasmuch as in disposing of surgical and dental instruments and appliances the Surplus Government Property Disposal Board makes special offers to demobilized R.A.M.C. officers and army dental surgeons at a discount of 10 per cent. for new goods and 33⅓ per cent. for used ones under the prices laid down in the priced list of medical stores, 1917, the same privilege ought to be extended in respect of the cars to be disposed of, in that medical men who sold their own vehicles to join the services in the great national emergency disposed of them before the artificial rise in prices occurred, and ought not to be penalized by the country for their self-sacrifice and patriotism.

For the rest, we may expect some lock-outs in the motor and allied industries now that the Government has decided to cease arbitrating in labour disputes, with the almost invariable result of arranging that higher wages shall be paid for less output. Moreover, the American industry will be at 100 per cent. production of post-war capacity by January 1st, and the Government has to settle with the importers at the end of this month. Therefore, the disease of unrest and insufficient output looks like being cured in some measure at no distant date.

A NOTE ABOUT FUEL.

The motor fuel situation is clearing gradually. The distributors of the country have given themselves until October 31st for what they call the reinstatement period, after which they expect conditions to be quite normal. Meantime, deliveries of cans, of which there was a great shortage, are coming through satisfactorily, and all the spirit being issued from now onwards by the leading distributors is of their own selection, purchasing, and importing. Therefore, unless the Government thrusts more of its own "faked" war spirit on to the public, of which there is no immediate prospect, it only remains for the stocks held by the retailers to be exhausted by the public before the motorists of the country will be supplied with post-war or ordinary motor spirit under the various brand names which have been revived to distinguish such fuel from the Government's war-time imports.

It is to the interest of the individual medical practitioner to make it known as widely as possible that users of utility motor vehicles, who are complicating the situation by their demands for No. I motor spirit, may return to "Taxibus," for instance, thereby relieving the disproportionate present demand for Pratts' Perfection, Shell No. I, or what not.

Moreover, benzol, such as the Anglo-American Oil Company distribute, is bought from members of the National Benzol Association under the guarantee that it is up to their standard specification, therefore there should be no occasion to be shy of using it in a proportion which, I suggest, should not exceed one part to three of petrol. Retailers expressing inability to supply such benzol should be told that the company has such quantities that it is "clogging its stores," and "wishes the public would ask for it."

THE Bureau of Census, Washington, has issued a preliminary report which shows that in the birth registration area of the United States, which includes about 53 per cent. of the estimated population of the Union, 1,353,792 infants were born alive in 1917. This represents a birth rate of 24.6 per 1,000 of population. The births exceeded the deaths by 74.4 per cent. The mortality rate for infants under 1 year averaged 93.8 per 1,000 living births. The excess of the birth over the death rate for 1917, which amounted to 10.5 per 1,000, was somewhat greater than the corresponding excess for 1916—10.1 per 1,000—although it fell slightly below that of 1915.

THE ROYAL SANITARY INSTITUTE.

THE thirtieth Congress of the Royal Sanitary Institute, held in Newcastle upon-Tyne from July 28th to August 2nd, was attended by some 1,073 persons, including official representatives from many allied and neutral powers, colonial Governments, the Admiralty, the War Office, and the Ministry of Health.

A large programme of work was provided, and in addition to sectional meetings dealing with (A) Sanitary Science and Preventive Medicine, (B) Engineering and Architecture, (C) Hygiene of Maternity and Child Welfare, (D) Personal and Domestic Hygiene, and (E) Industrial Hygiene, six conferences were held by representatives of sanitary authorities, representatives of port sanitary authorities, medical officers of health, engineers and surveyors, veterinary inspectors, and sanitary inspectors and health visitors.

The twenty official meetings were well attended, and the eighty-three addresses, lectures, and papers presented to the Congress were in most cases followed by keen discussion and debate.

In his inaugural address the President, the Duke of Northumberland, welcomed the delegates to this Congress, which he stated was probably the most important ever held by the Royal Sanitary Institute, as it would enable the lessons in preventive medicine learnt during the war to be applied to the prevention of disease amongst the industrial population.

SECTION A.—SANITARY SCIENCE AND PREVENTIVE MEDICINE.

Professor Sir G. Sims Woodhead, the president of the section, was unfortunately unable to be present owing to illness, but his address was presented by Dr. W. J. Howarth. In it he stated that as a result of the war the value of the individual to the State had come to be fully appreciated and much had been learnt as to the possibilities of saving life. He advocated State-aided research into the causes of disease, and said that the knowledge so obtained should be widely disseminated to prepare the way for legislation.

Two sessions were devoted to the work of the section. At the first the subject for discussion was the rat problem, and papers were submitted dealing with the zoology of rats, their relation to disease, and measures for controlling the rat population. The treatment and prophylaxis of venereal diseases was discussed at the second session, which was the best attended sectional meeting of the Congress. The balance of opinion was against the use of prophylactics, on the score of sentimentality.

SECTION B.—ENGINEERING AND ARCHITECTURE.

The President, Major-General Scott Moncrieff, K.C.B. (late R.E.), traced briefly the improvements which had been effected in the construction of barracks and hospitals for one section of the population, namely, the army.

Mr. R. Brown, of the Ministry of Health, said that the Government were anxious for schemes to be submitted by local authorities as early as possible, and would assist with labour, transport, and material, of which last they had more in hand than was likely to be required for some time. The Government aimed at 100,000 houses being built in the first year and 200,000 in the second.

Mr. Cotterell pointed out that opportunities were now offered to develop new towns on carefully planned lines, and new schemes should be so arranged as to form the nucleus of new and improved industrial centres.

Mr. W. H. Knowles, F.R.I.B.A., suggested that a ring of schools should be built on the outskirts of every large city.

SECTION C.—HYGIENE OF MATERNITY AND CHILD WELFARE.

This proved the most popular section and showed the highest average attendance.

The first subject discussed was the unmarried mother and her child, and it was argued that the question of proper provision for mother and child was a national responsibility and should not be a local burden.

Dr. H. Scurfield (M.O.H. Sheffield) read a paper on mothers' pensions, and following upon it a resolution was passed and forwarded to the Council of the Royal Sanitary Institute requesting them to consider the advisability of urging the Ministry of Health to adopt a system of mothers' pensions which would enable necessitous widows, deserted

wives, wives of disabled men, and the mothers of large families to care for their children in their own homes.

The second day was devoted to the consideration of the causes of disease and death in the antenatal period and the organization of antenatal hygiene.

Special attention was drawn to the importance of the midwife as a factor in any scheme.

The danger of venereal diseases was emphasized, and it was insisted that diagnosis should be early and accurate, while treatment should be immediate, adequate, and easily accessible.

Section D.—Personal and Domestic Hygiene.

There was heard much adverse criticism of many present household methods and appliances, together with suggestions in the direction of improvement.

Papers dealing with national kitchens, central heating and hot water supply for groups of cottages, and how to fit the small house to the needs of the tuberculous, were also submitted.

Section E.—Industrial Hygiene.

In the course of his presidential address Sir Thomas Oliver stated that although general amelioration of factory conditions commenced several decades since, still the rate of improvement was slow. The great thing in industry was to avert "breakdowns," and the length of the shifts must be regulated by the physical ability of the workers. Tribute was paid to the value of the Daylight Saving Act in providing an opportunity for the worker to enjoy an hour's extra sunshine in the evening. In conclusion, he said that an industrial revolution was proceeding, the trend of which, if wisely guided, would be towards social improvement.

In an important paper on the effect of occupation upon the incidence of pulmonary tuberculosis, Professor E. L. Collis, Director of the Institute of Preventive Medicine, Cardiff, concluded that industry is associated with undue prevalence of a type of phthisis which causes death in middle age, and the determining factor may be defective ventilation either of the workshop or of the lungs.

Dr. F. Shufflebotham (Newcastle-under-Lyme), in a paper entitled "Health conditions of the coal mining industry," contended that there was much room for improvement in the housing and working condition of the miner, and suggested that the temperature of "hot" seams be reduced to 77° F. or less, that lamps of increased candle power be introduced whereby nystagmus could be checked and eventually wiped out, while many accidents could be avoided, and that accidents should be notified and published weekly.

Dr. E. F. Pratt, Newcastle-upon-Tyne, contributed a paper on factory accidents, their cause and prevention.

Conferences.

Sanitary Authorities.

At the conference of representatives of sanitary authorities, following the address by the President, the subjects of municipal hospitals, crematoria, and municipalities and health were discussed.

Port Sanitary Authorities.

On July 30th the representatives of port sanitary authorities met. Dr. J. Howard-Jones put in a further plea for an international standard of hygiene of crews' quarters on merchant ships, pointing out that while under the new housing schemes not more than twelve houses were to be built to the acre, seamen were only allowed 72 cubic feet of space in their sleeping quarters.

Marine Hygiene.

At night Surgeon Rear Admiral Sir Robert Hill, Medical Director-General R.N., delivered a lecture to the Congress on marine hygiene. While conditions in the navy and mercantile marine differed somewhat, they had, he said, one very important point in common—namely, the limited amount of sleeping and working space; he hoped that the experience gained in the navy would be applied to the amelioration of the merchant service. It was, he considered, significant that tuberculosis should remain one of the main causes of invaliding, for it showed that the men's environment must be improved by all means at their disposal.

Medical Officers of Health.

The conference of medical officers of health was the most important of the series, and the business occupied two mornings. In the presidential address Professor Henry R. Kenwood (President of the Society of Medical Officers of Health), giving an account of the proposed activities of the Red Cross in times of peace, said that it would be the aim of the League of Red Cross Societies to contribute in every practical way, within the limits of the available resources and without distinction of nationality, to the betterment of the health circumstances of the world, and particularly to succour the people in those areas which were most necessitous. This League, which was a corollary of the League of Nations, was establishing a central bureau in Geneva. Its first efforts would be directed towards combating typhus in Poland.

In a paper entitled "Progress of water purification," Sir A. C. Houston gave a short review of the subject. Dr. W. Allen Daley (M.O.H. Bootle) advocated a scheme whereby one health authority would be responsible for all public medical work in each area. Dr. G. A. Auden (School Medical Officer, Birmingham), in dealing with the position of the special school in educational organization, suggested that special training in educational psychology and the diagnosis of mental deficiency should be given to school medical officers, and that some organized system of dealing with backward children should be introduced.

Dr. E. S. Buchanan, speaking on the subject of epidemic diseases brought into prominence by the war, mentioned that eighteen small outbreaks of small-pox had occurred already this year; only by constant vigilance and attention to vaccination could the disease be kept at bay. Dealing with typhus, he emphasized the importance of the association with famine and misery, and stated that while epidemic spread was unlikely, there were possibilities of local occurrence. With the resumption of the pilgrimages to Mecca the danger of the reappearance of cholera increased. Dr. Neech (M.O.H. Halifax), in a paper on the after-care of the sanatorium patient, with special reference to future housing schemes, urged that as treatment of phthisis had proved unsatisfactory it was important to concentrate on prevention. This he proposed to secure by an ambitious scheme for rehousing practically the whole population in bungalows with open-air bedrooms.

Engineers, Surveyors, and Veterinary Inspectors.

The conference of the engineers and surveyors to county and other sanitary authorities was mainly concerned with the housing question, while that of the veterinary inspectors dealt with the importance of the inspection of cattle in relation to the control of contagious diseases of animals and the fuller development of a wholesome meat and milk supply.

Sanitary Inspectors and Health Visitors.

The most important feature of the conference of sanitary inspectors and health visitors was a plea for the recognition of the important part played by women health visitors in social reconstruction and the need for a higher standard of education, which should be rigidly enforced.

The Popular Lecture.

Sir Robert W. Philip, President R.C.P.E., took for the subject of the popular lecture, "The heritage of health." In a fascinating address, which held the audience spell-bound, the lecturer showed that while, with relatively few exceptions, all children were born quite healthy, most of the weakness and sickness of life were the outcome of ignorance or neglect of simple physiological laws. Health ideals must be created and a higher conception of health developed under the guidance of the medical profession.

Exhibitions and Excursions.

During the Congress a very successful child welfare and mothercraft exhibition was held in the Rutherford College under the auspices of the Newcastle Maternity and Infant Welfare Centres.

An excellent local programme had been arranged reflecting great credit on the local secretaries. With the exception of a sharp shower of rain on the Thursday beautiful sunny weather prevailed throughout the week and enabled those who attended the garden parties to see Alnwick Castle and the famous Jesmond Dene at their best.

British Medical Journal.

SATURDAY, AUGUST 9TH, 1919.

THE TREATMENT OF MENTAL DISORDER.

The question of the treatment of incipient insanity has been discussed from time to time in this Journal, and there is a growing body of opinion that reform in this direction is urgently needed. All those who are best qualified to judge are convinced that the lunacy law as it now exists prevents the treatment of mental diseases from reaching the level required by modern standards and aspirations. At present the law is such that mental disease cannot be treated, except in the home of the patient, without certification. The public entertain a natural prejudice to the procedure of certification, and it is felt that the law must be amended so that mental clinics may be developed upon the lines of a general hospital, quite distinct from existing asylums, and in which patients may be admitted without the stigma of certification. Such a reform would prevent much unnecessary certification, it would ensure treatment for a patient before he drifts into a chronic and incurable condition, and it would prove of considerable educational value to the medical profession. At the present time it might be said that psychiatry occupies a position in relation to modern medicine analogous to that of a certified patient to society; it is out of contact with the current of medical thought and practice and remains as a more or less isolated medical interest. Clinics for mental disorders would do much to remedy this state of affairs and would serve to widen the study of this most important branch of medicine.

Active steps are now being taken in various directions to bring about an amendment of the Lunacy Act which will meet the needs of the case. Especially significant is the attitude towards the problem of the Asylum Committees which represent those members of the public who are most intimately acquainted with the practical working of lunacy law. Reference was made in our issue of January 25th, 1919, to the newly constituted National Council of Institutions for the Treatment and Care of the Mentally Afflicted (Mental Hospitals Association) in which most of the English asylums are represented. This important and influential council, in spite of the fact that it has been concerned largely with pressing industrial problems in connexion with asylum employees, exhibits a thoroughly progressive spirit in regard to the treatment of insanity, and it urges a drastic amendment of the lunacy law as a matter of urgent national importance. Foremost in its recommendations is a reform which will make it possible for local authorities to establish special mental hospitals for the treatment of incipient or actual mental disease without certification. We understand that recently a deputation from the executive of this council, under the leadership of Alderman Morgan Thomas, ex-Lord Mayor of Cardiff, was introduced by Lord Digby, Chairman of the Dorset County Asylum, to representatives of the Home Department and the Board of Control. The deputation was sympathetically received and an intimation given that the Government would shortly introduce legislation on the subject. Such a deputation, expressing as it does the opinion of Asylum Committees, should do much to convince the Government of the strength of public feeling in regard to the necessity for reform.

It is interesting to observe, also, that practical schemes are in process of development in regard to the suggested reforms. It is proposed to establish in connexion with King Edward VII Hospital and Medical School at Cardiff an in-patient and out-patient clinic for mental diseases, and a conference, presided over by Alderman Morgan Thomas, was held recently to formulate the details of the scheme. The meeting included members of the Hospital Committee and university, the Chairman of the Board of Control, Sir William Byrne, and Dr. C. H. Bond, one of the medical Commissioners. A scheme was outlined for the erection of a building near the infirmary for the modern treatment of mental disease and provided with facilities for research and teaching. The conference was unanimous in resolving to promote the object in view and a committee is to be formed to develop the scheme with the advice and co-operation of the Board of Control. The Cardiff Mental Hospital, with Dr. Edwin Goodall as medical superintendent, has, since its opening, always been prominent for research in mental disease, and it is to be hoped that this further progressive move will only be the forerunner of similar activities in the other teaching centres of the country. Schemes of this kind have, of course, their financial side. Such clinics as are proposed will involve a considerable initial outlay and will be more expensive than is the case in ordinary asylums. In so far as such centres of treatment should prevent many patients from being recruited into the class of the chronic insane a saving will ultimately occur, but the financial aspect is really a very secondary consideration in view of the social benefits which such reforms will bring about. Though the amending bill has not yet been adopted by the Government it is probable that a fair proportion of the maintenance charges and annual charges upon capital expenditure would be met by the State and the remainder by the local authority. It is probable, however, that some difficulty will be found in raising the money for the establishment of such clinics and their sites; there will thus be ample scope for generosity on the part of private individuals, and the public must be brought to realize the social importance of such hospitals.

In view of the fact, therefore, that the Board of Control, the Medico-Psychological Association, and the Asylum Committees are unanimous as to the need for reform, it would seem that the Government ought easily to be convinced of the necessity for early legislation, and it is to be hoped that an amending bill may be introduced during this year. Conditions created by the war have forced on the attention of many members of the medical profession the importance and interest of the psychoses and neuroses, and it now only remains for new legislation to make it possible to develop active centres of study, teaching, and research where this new interest may be guided and stimulated under the direction of qualified experts. It is by such means that psychiatry may attain in England the position and usefulness it occupies in other countries.

THE CONDITIONS OF INSURANCE SERVICE.

In our last issue attention was directed to the chief decisions of the Representative Body referring mainly to a future medical service when the Ministry of Health is in a position to make a complete revision of the present panel service. It remains now to

summarize the decisions of the Representative Meeting and the Conference of Panel Committees, referring more directly to the present panel service and only more remotely to a fully revised service, although, as already stated, it was not possible to avoid some overlapping in enumerating the subjects discussed at the two meetings.

In reply to questions in the Representative Meeting, Dr. Brackenbury, Chairman of the Insurance Acts Committee, assured the meeting that that Committee had not approached the Government with any fixed policy. Discussions had taken place the purport of which were before the Representative Meeting and the Conference, and the policy, if authorized by the two bodies, would be placed before the Ministry. Referring to the remuneration of panel practitioners, he repeated to the Representative Meeting what he had announced to the Conference, that as a temporary arrangement for 1919 there would be an all-round increase of 15 per cent., an additional 15 per cent., making 30 per cent. in all, for those with incomes under £500, and an additional 5 per cent., making 20 per cent. in all, on incomes between £500 and £1,200; the acceptance of this arrangement was in no way to invalidate the demand for a permanent increase. This offer was subject to the qualification that the maximum bonus on incomes under £500 should be £150 and for the rest £300.

Considerable discussion took place on the National Insurance Defence Fund, and the Solicitor of the Association assured the Representative Meeting that the members of the Insurance Acts Committee would be individual trustees of the fund, which would be quite separate from the funds of the Association.

A motion in the Representative Meeting protesting against the general tenor of M. 25 (report of Insurance Acts Committee) was lost on the assurance being given that the Committee was strongly against a whole-time State medical service, and it was agreed that the terms of any contract of service under the altered conditions should be sent to the Divisions in time to allow of discussion, especially with regard to extra services. As regards the medical referees, Dr. Brackenbury stated that they would probably be appointed by the Commissioners, would be paid whole-time salaries, would act not simply as referees but as medical advisers to the clinical health authorities, and would not interfere between doctor and patient. The meeting agreed that the referees should be appointed by the Commissioners, and should be men of wide experience in general practice. It was stated, further, that the old record cards would not be revived, but that a new form would be introduced which would probably serve as a continuous medical history, and would be settled by a scientific committee. The Conference of Panel Committees had already supported this idea.

Several resolutions were accepted in the Representative Meeting making obstetric practice optional to panel practitioners. The Conference had already accepted the proposal of the Insurance Acts Committee to the effect that attendance on pregnancy and labour should be part of medical benefit, but that panel practitioners should be at liberty to decline these services, which should be paid for out of a special fund altogether apart from the pool. The Conference had also decided that for the present the salvarsan treatment of syphilis should be regarded as outside the contract. The general method suggested by M. 25 for determining what services can be required from a panel doctor was accepted, as being simpler and more satisfactory than the present procedure. An extension of facilities for contracting out, that is, for allowing insured persons to make their own arrangements for treatment, was advocated by a number of representatives, but did not meet with general approval.

The following subjects were dealt with more in detail by the Conference, though the Representative Meeting gave passing attention to some of them. A resolution was carried that the distribution of the local pool should be made not later than the last day of the quarter. Considerable discussion arose with regard to the payment for temporary residents; a number of representatives wished to retain the present system, but it was finally decided to accept the proposal of the Insurance Acts Committee (M. 25, para. 10). The result will be that the present temporary resident calculations as affecting the distribution of the central pool will be done away with, but the number of cases in areas where they have an appreciable effect will be taken into account in fixing the fraction of the central pool to be assigned to areas. A long discussion also arose about the limitation of lists. M. 25 had suggested that the individual panels might be limited to 3,000 insured persons, but a resolution was carried to the effect that while there should be no fixed limit, if the Insurance Committee brought to the notice of the Panel Committee the fact that a practitioner's list exceeded 3,000, and that for this reason the service was inefficient, the Panel Committee should satisfy itself as to the adequacy of the service, and, if found inadequate, the limit of 3,000 might then be imposed on the doctor concerned, with certain provisos to prevent hardship. Dr. Brackenbury stated that a considerable number of doctors had 6,000 on their lists, and one had 8,000. An addition was made to the resolution that there should be no reduced capitation for the larger lists. The suggestion of the Insurance Acts Committee that a minimum assured payment should be made to entrants into practice met with little favour and a resolution against it was carried.

On the question whether certain special services should be made a first charge on the pool there was evidently a good deal of misapprehension; it was pointed out, first, that the special services in question were not services by specialists but only such special services as are now, or in the future may be part of the contract of the panel doctor, such as the giving of anaesthetics and attendance at miscarriages; and secondly, that, provided the amount of remuneration was adequate, it made very little difference whether there was a separate pool for such special services, or they were made a first charge on a common pool. There were, however, some disadvantages in dividing the remuneration, the total of which was fixed, into two pools—one for ordinary and the other for the special services. In the end the Conference agreed with the Committee that there should be only one pool for the services required from practitioners under their contract.

With regard to persons who fail to produce medical cards or other proof that they are entitled to treatment, it was agreed that the doctors might charge fees which would be refunded on proof that the person was really entitled to treatment, provided that if a person through his own negligence unreasonably failed to produce evidence of his title, the fees should not be returned to him, but should be retained by the Insurance Committee, which would deduct them from the doctor's next account, as it would be unfair that the doctor should be paid twice over.

On the subject of change of doctor, it was resolved that there should be opportunity for change twice a year instead of once as at present. The subject of the mileage fund led to some sharp criticism from

rural practitioners, but, with the addition of a rider that the conditions in Scotland required separate consideration, the report of the Rural Practitioners' Subcommittee was approved. The question of the agreement entered into by panel practitioners led to a statement by the Solicitor of the Association which deserves careful reading, as it removes many misapprehensions (SUPPLEMENT, July 26th, p. 33).

The paragraphs of M. 25 referring to extensions of the medical service brought a promise that the question of payment for extra services would be placed before the Panel Committees, but it was not possible to discuss the payment until it was settled what extensions of the service were to be provided; it was, however, expected that it would be possible to present some idea of the amount of extra payment required to the October conference. If not, the new agreement would not be brought into operation until next April, but it was considered clear that the remuneration would be at a considerably higher scale than the present 7s. 6d. The Chairman of the Insurance Acts Committee outlined the arguments which the Committee thought would weigh in discussing the remuneration and the conditions under which the new services should be rendered. It was agreed that the Association should consult with other representative bodies, as the question of the extension of the service affected the whole profession, both those who are on the panel and those who are not. An amendment to M. 25 was carried disapproving, under present conditions, of general practitioner clinics. It was also resolved that a sufficient sum should be provided in the central pool to pay adequately for services to invalided soldiers and sailors and demobilized men whose health had suffered in the services, and it was explained that the present method of payment for invalided men would be ended.

On the motion, which was carried, that the Committee be authorized to continue the discussions with the Government for new terms and conditions of service, Dr. Brackenbury said that the Association was going to organize the profession with a view to refusal of service if satisfactory terms were not obtained on the lines of the amended reports, and the Committee was prepared to consider fully suggestions from Local Medical and Panel Committees. It was repeatedly made clear that the Insurance Acts Committee is strongly opposed to a whole-time State medical service. Its constitution as settled by the Representative Meeting makes it possible for persons who are not members of the British Medical Association to be returned as direct representatives of Panel Committees on the Insurance Acts Committee.

In a letter which is published in the present issue, Dr. P. Macdonald of York objects to the unwieldy character of the Conference, and rather commends the Association of Panel Committees, whose constitution he explains. Dr. Brackenbury replies by pointing out that in reality the central executive of the Conference is more directly representative of panel practitioners than the executive of the Association of Panel Committees, inasmuch as the latter is only in a fourth-hand relation with panel practitioners and is in no relation at all with non-panel practitioners, while the executive of the Conference (which has grown up under the auspices of the British Medical Association) is only two removes from the panel practitioners themselves and contains representatives not only of the British Medical Association, but of other important professional organizations, all of which are more or less concerned with the medical service of the country. This distinction is extremely important; the object of the British Medical Association has been to get as direct a representation as possible of every section of the profession that can be concerned. The advantages of sectional or group conferences are fully recognized by the British Medical Association and such group conferences are in regular use, but in spite of the disadvantages under which larger conferences labour they have the great advantage that they offer a wider opportunity than any other scheme for criticism of the executive, which in all modern electorates is rightly regarded as so essential. To reduce the representation with the idea of making the Conference less unwieldy, or to limit the scope of discussion even of details, would give ground at once for a suspicion that the profession was being ruled by a few.

POST-GRADUATE INSTRUCTION IN AMERICA AND ENGLAND.

WE have received from Dr. Graham Little a letter in which he speaks of the cordial reception given to British delegates who visited the annual meetings of the American Medical Association and the American Congress of Physicians and Surgeons in June. Sir Anderson Critchett, Sir StClair Thomson, and Dr. Little himself were invited to give addresses to the sections of ophthalmology, laryngology, and dermatology respectively. The last named section was presided over by Dr. Jay Schamberg, who is the head of the laboratory which produces the American substitute for salvarsan, named "arsphenamine." It was stated that the quality of salvarsan imported from Germany deteriorated very sensibly in the early stages of the European war, and a considerable quantity carried by the submarine *Deutschland*, which evaded the blockade, was no better. Finally, Dr. Oliver Ormsby, professor of dermatology in the University of Chicago, made public the results of experiments on animals, which showed that the German supply was very toxic. The product made under Dr. Schamberg's direction in the laboratory at Philadelphia has proved a very excellent product and has entirely replaced in the States all other forms of Ehrlich's drug. Going on to speak of post-graduate study, Dr. Graham Little writes: "Exceptional interest was shown by our American colleagues in the proposals to organize post-graduate work for American students in London, and to provide opportunities for research, study, and social amenities. The Fellowship of Medicine, recently instituted by the Royal Society of Medicine, is a small beginning which deserves the support of all who are anxious (and who is not?) to promote the present cordiality of our relations with the United States. At the last meeting of the Senate of the University of London which I attended on the eve of my leaving England, a resolution was passed instituting a new doctorate in philosophy which is especially designed for the needs of American and overseas post-graduate students. The inception of a special hospital for research which shall be a home and a stimulus to American medical visitors to London also aroused the utmost interest, and the scheme was most attractively presented by Sir Arbuthnot Lane, the delegate to the meeting from the Royal Society of Medicine, whose enthusiasm could not fail to be infectious. It is, however, quite certain that the medical schools of London, if they wish to divert the American student from Berlin and Vienna to London, will have to exert a much more sustained effort than any yet evident. In particular, it will not do to try and combine the teaching of post-graduate with undergraduate students. The American universities themselves are conscious of the impossibility of this combination, and it is important to note that the great University of Chicago, which has at last absorbed Rush Medical College into its Faculty of Medicine, is immediately founding a college for post-graduate study with a separate building and staff but

comprised in the Faculty of Medicine, and it has been gracefully conceded that this post-graduate college shall retain the honoured name of Rush. In conclusion I would say that our American hosts urged us to persuade more of our students and colleagues to visit them, and there is no doubt that the warmest welcome awaits such visitors. The interchange has hitherto been very one-sided—for example, I crossed the Atlantic with an ophthalmic surgeon of Philadelphia, who told me this was his twenty-second trip to England."

FRANCO-AMERICAN MEDICAL RELATIONS.

M. TUFFIER, who among French surgeons is perhaps the most known and esteemed in other countries, has recently presented to the Académie de Médecine, Paris, a report on a memorandum by Dr. Dehelly, on the best means for establishing medico-chirurgical relations with the United States. The memorandum was sent to the Academy by the Franco-American War Committee. M. Tuffier showed that the arrangements in France were insufficient, a fact of which he had become convinced after a visit to America in 1913. He urged on the members of the Academy the need for immediate action. Before the war American doctors looked upon Germany as the centre for instruction, and already, he said, steps were being taken on the other side of the Rhine to resume university courses and to regain the influence lost by the war. In Brussels, also, an organization to attract medical graduates was being elaborated, so that there should be no delay in taking advantage of a propitious moment not likely to recur. He deprecated placing any reliance upon Government co-operation, which might be long delayed, or waiting for the establishment of new university organizations. If the desired co-operation was to be brought about there must be free exchange of ideas, of men, and of scientific material, and to this end the facilities for instruction in Paris and throughout France ought at once to be organized. Although for the post-graduate visitor there was at present no regular teaching, it could easily be arranged. The visitor needed a place at which he could ascertain what was going on from day to day. An association for the development of Franco-American medical relations already existed, and included a large number of teachers and hospital officers in Paris; foreign visitors could attend the instruction given in medicine, surgery, and the specialties. At the Saint Louis Hospital there was a very complete programme—clinical practice, theoretical lectures, demonstrations, and laboratory work. The Collège des Etats-Unis d'Amérique established by eminent French and American men of science, under the patronage of the United States Ambassador and the French Minister of Public Instruction, already provided a central office. Every American arriving in Paris found there a list of all the courses in progress in Paris, or elsewhere in France, and the addresses of all the laboratories where instruction could be obtained or researches caried on. It was intended to establish a club in connexion with the College, with reading, writing, and conversation rooms. An office on the same lines was to be organized in New York for French students. Though the Franco-American College and Association in Paris fell short of all that might be wished, they yet, in M. Tuffier's opinion, afforded a beginning of co-operation between France and America.

VILLAGE CENTRES FOR DISABLED MEN.

AT the first annual meeting of the Village Centres Council the administrator, Major Garthwaite, D.S.O., reported that the Enham Village Centre, in Hampshire, had been opened for ex-service men on May 30th, and that there were now thirty men in residence receiving medical treatment and undergoing training, mainly in horticulture, agriculture, and forestry, but also in workshops for basket-making, electrical fitting, and carpentry. The medical director, Dr. Fortescue Fox, said that the interval between a man's discharge from the army and his reception at Enham varied from one to forty-three months, with an average period of twelve months at his home. Nineteen out of the total of thirty men at Enham had not done any work during the time, ten had attempted to return to work and had broken down; all were now working at Enham under medical supervision for from two to six hours a day. Nearly half the cases were under the care of Captain Douglas-Morris, R.A.M.C., neurologist. Several of the men had paresis after fracture of the skull, and were quite unfitted for town life, but had improved in the country. Patients with old wounds of the arm, attended by stiffness and wasting, were put to light curative work, such as thinning grapes, clipping hedges, sawing or wood cutting. All the men should be regarded as neurasthenic, and a large proportion of them would never be able to compete with able-bodied men in industry, so that village centres would have to provide special industries for permanently subnormal men. Re-education and the choice of an occupation should be based upon exact measurement of each man's physical and mental capabilities, and an estimate of his family circumstances, and the condition of the labour market. The industry of the disabled, if properly guided, could make a very large addition to the production of the country. Sir George Makins, G.C.M.G., vice-president, who was in the chair, and Sir Rickman Godlee both expressed the hope that the type of disablement selected for the Enham Centre should be such as could be effectually treated, so that a considerable number of cases could be passed rapidly through the centre.

INTERNATIONAL CONGRESSES.

MR. ADOLPHE SMITH, known to numerous members of the medical profession as the representative of the *Lancet* at many medical congresses, has contributed to *The Times* an essay in three chapters on the Pan-German Internationale. It is brilliantly written and composed with authority, for he is fully and closely acquainted with all that has happened at the socialist congresses, called of the "Internationale," since 1882. His main thesis is that as the military caste headed by William II worked for world dominion by force of arms, so Marx and his rather clumsy lieutenant Engels worked to obtain for German socialists a command over all the labour organizations of the world. For the delusion of the foreigner the German socialists declared themselves the enemies of militarism, but the events of 1914 proved that whatever shade of red they wore all were working for German domination of all the nations from the Eastern shores of Russia to the Western shores of America. The same ambition was gradually disclosed at medical and other scientific congresses. At the International Medical Congress in London in 1881 the German members took a share proper to the representatives of a nation claiming equality with others. The great men of the Congress were Pasteur and Lister, Paget and Bigelow, Virchow and Huxley. But after that, as international congresses, whether of medicine or hygiene, succeeded each other, the German professors became more and more overbearing, and the feeling grew that their methods conflicted with the free spirit of scientific inquiry and discussion. Mr. Adolphe Smith, than whom few have had better opportunities of judging, does not hesitate to say that these arrogant methods were part of the general scheme. "It has been my privilege," he writes, "to attend nearly all the international congresses of hygiene, and several of the international congresses of medicine, of the medical Press, of the war against tuberculosis, and of other kindred movements. Here, among members of the liberal professions, as in working class congresses, the German delegation acted with the same military discipline. The science which they represented was a secondary consideration; the interests of Germany, the advertising of

German achievements, not to say German goods, was the first object. In all fields of action the German as an internationalist needs to be studied with far greater care than as yet has been bestowed on him. We must no longer be deceived by the nominal purpose of a congress; the political interests that are hidden behind must be fathomed. . . . Science is supposed to recognize neither frontier nor private interests, but to be devoted to the pursuit of truth. To the German it would appear as if the sole mission of science is to serve Germany. And this is pan-Germanism, not internationalism." Before the war opinion was gaining ground in many countries that it was not worth while to continue the series of international medical congresses. They had grown too large and heterogeneous, the material brought before the multitudinous sections was commonly stale, and there was a suspicion that the motive with which much of it was presented was personal or, at the best, national advertisement. Mr. Adolphe Smith's observations will strengthen this view. If in future there are to be international congresses of members of the medical profession, it would be better that they should be limited in scope. The international congresses of surgeons, ophthalmologists, physiologists, and anatomists have been useful gatherings, for specialists in these subjects were in a position to judge the real value of men and their papers, and there was comparatively little room for pretence or political propaganda.

INDUSTRIAL FATIGUE AND SCIENTIFIC MANAGEMENT.

The Industrial Fatigue Research Board was appointed at the end of 1917 by the Department of Scientific and Industrial Research to investigate the relations of the hours of labour and other conditions of employment to the production of fatigue, having regard both to industrial efficiency and to the preservation of the health of workers. This board has recently issued two reports.* One of these, by Ethel E. Osborne, M.Sc., on the output of women workers in relation to hours of work in shell-making, arrives at results for which previous investigations have prepared us. The investigations were concerned with the first operation to which the rough forging is subjected; it consists in cutting off the end portion of the forging to reduce it to the required length. It is considered the hardest work in shell-making, must be done rapidly, and entails constant changing of shells. For eighteen months the women doing this in the National Ordnance Factory worked on shifts of twelve hours' duration, with night and day work in alternate weeks. It then became evident that the hours were affecting the women adversely, and the shifts were shortened. Some time previously the machines had been changed to a type which considerably reduced the demands for violent physical exertion. The method in which the investigation was conducted is described at length, but we can only notice the chief general results. Under the earlier scheme the average number of hours worked was 55.85 a week, under the shortened scheme 35.65 a week. On the long hours system the average number of shells each operator turned out in an hour was 8.17; on the shortened shift it was 8.70. Study of the actual fraction of the total working time occupied in the automatic cutting of shells and in their handling respectively—the latter being a period in which speeding up was possible—showed that the work accomplished in 100 minutes of the long hour system was carried out in 80.5 minutes of the short system—a decrease of 19.5 per cent. in time. Taking the average hourly output of shells per hour of actual work as 100, the average hourly output of shells per hour in the factory under the long hour scheme was 85.43, and under the short hour scheme 92.41. The second part of the report is based on a study of actual hourly output; it shows a uniformly low efficiency in the last hour of the long shifts, whereas no such uniformity was to be observed in the case of the short shifts. In some instances there was no falling off at all. A comparison of the records of the same worker's output for the long and short shifts respectively showed a lower hourly output during the later hours of the long shifts. The investigation afforded no evidence of a detrimental effect of night work in comparison with day work. The second report, by Dr. C. S. Myers, F.R.S., gives an account of a remarkable experiment carried out, with the consent of the workers, by Mr. Vincent Jobson, managing director of the Derwent Foundry Company, Derby. The first step was to analyse the various jobs in order to arrive at the best method, by the elimination of all superfluous movements. This involved the proper arrangement of the tools and materials, the establishment of standard sets of movements for the process, and the training of the men. When the system was got going the number of hours of work was reduced and a special system of payment devised. The result was an enormous increase of output in spite of the reduced hours of work. This increased output, combined with the diminished cost of production, has been beneficial to the firm and largely increased the wages of the employees, without causing any increase in fatigue, but rather on the whole, apparently, a decrease.

*H.M. Stationery Office (through any bookseller), 6d. and 2d. respectively.

MEDICAL ASSISTANCE IN OLD SIAM.

In the *Medical Journal of the Siam Red Cross* for April, 1918, G. Coedès, Conservator of the National Library at Bangkok, gives an account of medical assistance in Siam in the twelfth century, as described in Sanskrit inscriptions found in Siam and Cambogia. In 1182 a prince who on his coronation assumed the name of Jayavarman (the Favourite of Victory) ascended the throne. Unlike his predecessors, who professed Brahminism, he was a fervent Buddhist. His religion was inspired by the charity and pity for the unhappy which are characteristics of all the different sects of the disciples of the Great Merciful One. One of the chief aims of Jayavarman VII was, as inscriptions prove, to cover his empire with a network of hospitals. One of the most important inscriptions is on a large stele found at Ta-Prohm. It is in Sanskrit, and bears a date corresponding to 1186 A.D.; it sets forth in detail the annual cost of the King's good works. It states that there were 102 hospitals scattered about the various provinces of the kingdom; for the sick in those institutions there were required yearly 117,200 khârikâ of rice (a khârikâ is equivalent to 1.536 kilos). The production of this rice employs 81,640 men and women dwelling in 838 villages. Particulars are given as to the clothing, foodstuffs, medicinal substances, and remedies of various kinds supplied annually from the royal stores. Offerings of rice were made to the patron divinities daily; the remains were given to the patients. Exploration has brought to light nine other steles with inscriptions also dated 1186 which indicate the situation and the charters of foundation of nine of the hospitals. Five of the steles were found in Siamese and one in French territory. The three others were found in Cambogia. Of the nine hospitals there is nothing left. Like all buildings not having an exclusively religious character they were constructed of wood and light materials. Stone ruins of chapels connected with the hospitals have been found beside some of the steles. The text of the nine inscriptions is identical, with slight variants; they are, in fact, royal charters regulating the organization of each hospital. The hospital is said to be under the invocation of the healing Buddha, Bhaishajya-guru-vaiduryaprabba, still to-day one of the most popular Buddhas in China, Japan, and Thibet. The four castes might be treated in the institution. There were two

physicians, each having one man and two women as his servants; two storekeepers who distributed remedies; two cooks who were required also to remove flowers and grass and to clean the temple; two servants charged with the preparation of the offerings to Buddha; fourteen infirmarians whose duty was the administration of remedies; six women who heated the water and pounded medicaments; two women who peeled rice. The total number of assistants lodged in the hospital was thirty-two. There were besides sixty-six workers living at their own expense; this brings the total to ninety-eight. The duties and rights of each official and servant were exactly defined. The staff were exempt from taxation and from public duties unconnected with their employments.

Medical Notes in Parliament.

Pensions Ministry: The Medical Services.

THE medical services occupied a large place in the review of administration and statement of future arrangements given by the Minister of Pensions on July 31st. The vote was for £45,855,000 to be added to a sum of £27,000,000 voted on account. Sir L. Worthington Evans, in opening, however, said that this estimate of nearly £73,000,000 was already out of date. The 20 per cent. bonus to officers' retired pay and to alternative pensions to officers and men and their widows, with other alterations, will this year cost a further sum of over £2,000,000, and the extra expenditure involved in the recommendations of the Select Committee's report would raise the expenditure for the remainder of this year by £11,000,000; thus the total estimates for the year will come out at £86,000,000. The effect of the recommendations on a full year will, of course, be still larger, and it is reckoned that on the present basis the rate next year will be about £96,000,000, or more than double what it was in the year ended April, 1919. The figures of distribution in summary, as payments were made on June 30th, were as follow: Officers and nurses drawing retired pay numbered just under 20,000; officers' widows just under 9,500; officers' dependants just under 5,000; officers' children just over 9,000; men, 875,000; widows, 216,000; dependants, 279,000; and children, 968,000. The full total, allowing for the odd numbers, was 2,340,000. The number of pensioners thus is almost exactly three times as great as the population of Liverpool.

Decentralization.

Sir L. Worthington Evans next spoke of the action he had taken since he came into office in January, to meet the many complaints of delay. A scheme for decentralization was adopted, whereby eleven or thirteen regions will be complete self-contained administrative units, under a regional director advised by a regional advisory committee. The Local Pensions Committees within each region will communicate direct with the regional director, and all medical boards and arrangements for medical treatment will be dealt with by the regional medical officer. The Scottish, Irish, and Welsh regions have already been established in Edinburgh, Dublin, Belfast, and Cardiff respectively, and the South-East of England region has been started in London. It is still for consideration whether two other regions shall be joined with this region, or whether the original proposal of thirteen regions will be carried out. He hoped that the North-West region would be inaugurated during the coming week in Manchester, and he would create the other regions as rapidly as possible.

Method of Making Awards.

In describing the method of awards of pensions for men, he said that before demobilization began the discharge documents of men coming out of military hospitals were sent to Chelsea, and awards were made on the fairly complete records then furnished. During the last six months about 150,000 first awards had been made in cases of men discharged from hospital, in addition to 274,000 renewals. With demobilization, two other classes of claimants appeared—namely, the "Z" men and the Article 9 cases. The "Z" men were those who, passing through dispersal stations, made claims; these claims were examined either by the medical officer of their unit or by some other army doctor. About 385,000 presented claims, and these, with the men's papers from the record offices, were sent to the Minister. In addition, there were others who from some reason or other, some because they feared that claiming would delay demobilization and others because they were then well, had not made claims. They could still do so under Article 9. In January he found that sufficient provision had not been made to deal with the claims of the "Z" men, and an emergency branch was established for them alone. Through February and March the arrears increased, but by the middle of June had disappeared. The greatest number of awards in any one week was 35,800, a remarkable performance, considering that each claim required separate investigation. Of the 385,000 claims, 303,000 were admitted, and awards made of pension, allowances, and gratuities, and 81,403 were rejected. He was not satisfied with the position in regard to the Article 9 cases, and the Local War Pensions Committees had been authorized, upon the report of the local medical referee, to make full advances pending the decision whether the claim was admitted to pensions or not. There was still considerable delay, and a special inquiry was being conducted to improve the procedure. Experience gained in dealing with these cases showed that much greater simplicity could be introduced into the Chelsea system. Improvements would be made.

Delays.

Early in the year he found that the complaints of delay in settling appeals against refusals to grant pensions were justified. There were cases pending since 1917, and many more which had been unsettled for a year. The two officials in charge of this section had now both left the Ministry, and the section had been completely reorganized; its output had been increased, and it would, he hoped, be still further improved, but until decentralization was completed, the ideal could not be reached. Last January two appeal tribunals heard cases. Now fifteen had been constituted, and arrears were being overtaken, but he was not satisfied that many more tribunals would not be required. Before he went to the Ministry, he heard many complaints that officers were not getting their pensions, and on becoming the Minister, he asked the Parliamentary Secretary to take the chair of a small Interdepartmental Committee, with representatives of the War Office and the Pensions Ministry, to consider the position. The Committee recommended that all officers should be kept on pay by the War Office until their papers were transferred to the Ministry of Pensions. The War Office, however, did not accept this suggestion, so the next best plan was adopted. The Treasury authorized advances to officers in necessitous cases, pending adjudication of pensions, and some 7,400 advances had been made to cover the time necessary for obtaining the officers' papers, or to have a medical board. The staff of the Officers' Branch had been increased from 85 to 430, and a pension was now awarded within twenty-one days of the receipt of the officer's paper. A distinguished soldier had been appointed to act as "Officers' Friend"; he and his staff of twelve officers had had interviews and correspondence with over 12,000 officers and their relatives; he called attention to delays, and was applied to on every conceivable question. Further, a small booklet, stating clearly to what officers are entitled, had been published. In addition, a small committee had considered the "Officers' Warrant," as officers had been omitted from many concessions made to men. These anomalies had now been removed. A bonus of 20 per cent. was payable on that part of the retired pay which was granted for service disability. Thus the minimum retired pay was now £210 instead of £175. A separation allowance was also payable of £50 to a wife, or £40 to a dependant, if the officer was in hospital. Children's allowances were formerly granted if the officer's disablement amounted to 50 per cent. or more. This limit had now been removed. Medical treatment could be given to an officer pending settlement of his claim to pension, and artificial limbs were supplied and repaired by the State. Pre-war disability retired pay was brought up to the current rate. Widows' pensions, granted in respect of previous wars, had been increased to the rates of this war. These substantial advantages, removing many grievances, did not seem, however, to be fully known. The 20 per cent. bonus was now added to the retired pay and to the pension of officers' widows, so that it ceased to be a bonus and became a regular part of the allowance. In making this increase, the Ministry set forth that after three years, if the cost of living fell, the allowance would be subject to automatic reductions as in the case of the men's pensions.

The Medical Division of the Ministry.

Sir L. Worthington Evans next spoke at length as to the medical services. He had been fortunate, he said, in securing as chief medical officer Colonel Webb, who brought special knowledge of the requirements of the serving

men who were now pensioners. The work of the medical division was probably the most important of any. It dealt with the provision of medical treatment in hospitals, clinics, and convalescent centres. Demobilization had transferred the duty of providing hospitals and clinics from the War Office to the Ministry of Pensions. Two hospitals had already been taken over, and the transfer of others arranged. The British Red Cross had offered the use of some of their hospitals, and provided ambulances for the conveyance of cot cases. Queen Alexandra consented to be President of the Pensions' Nursing Service, and he had been fortunate in securing as matron-in-chief Miss M. E. Davies, who would act with an advisory committee. He hoped also to have ready very shortly certain convalescent centres at Blackpool, Epsom, and elsewhere, in which men while suffering from disability requiring more or less prolonged out-patient treatment would be able to employ their time to their own advantage, by receiving preliminary training to fit them for their after-life. He had been impressed by the number of out-patients attending hospitals for perhaps half an hour a day, upon whose hands time hung heavily. If such men were admitted to convalescent homes they would, while under treatment, be capable of much useful training. Moreover, experience showed that many slightly disabled men, attracted by the high wages prevalent in the later stages of the war, went back into industrial life too soon, and were in many cases breaking down. For them the convalescent centres should be of great use.

Medical Boards.

From April 1st the central and regional staff of the Ministry of National Service was transferred to the Pensions Ministry. From August 4th it was taking over from the War Office the re-survey boarding of officers. Some idea of the extent of the increase of the work of the medical boards might be got from the fact that 230,000 men were examined by medical boards in the first six months of this year. There had been rapid increase in the number of men boarded owing to demobilization, and 45,000 men were examined in June. Under the system hitherto prevailing the medical officers at the head quarters of the Ministry, commonly known as the "Chelsea doctors," had reviewed the decisions of these boards. They were authorized to alter the amount of a man's assessment, even though they had not examined the man. Many complaints had been made, and the Select Committee had recommended that any case of doubt should be sent for rehearing, either by the same, or by a new board, for examination before the assessment was altered. He agreed with that recommendation, and indeed had previously decided to make the change.

Medical Appeal Boards.

While it was probably impossible to arrange for appeal boards before the Ministry of Pensions had its own medical personnel available to sit on boards, and specialists, both surgical and medical, at its hospitals and clinics, to constitute the boards, it would be possible to set up the appeal boards as soon as the medical personnel in the regions had been completed. Thereafter a definite procedure would be laid down, which would be followed in all cases; if the medical assessor, on scrutinizing the report of the board, was not satisfied that substantial justice had been done, either to the pensioner or to the taxpayer, he was to refer the case either back to the same board or to an appeal medical board before any alteration took place. Similarly, if the pensioner was not content with his assessment, he would be entitled to appeal to a medical appeal board, whose decision would then be treated as final, subject to the proviso, which was in the man's interest, that if he fell ill during the final period he would still have the opportunity of going to a medical referee, who might give him temporarily a higher allowance pending the reconsideration of his case by the board. This arrangement of appeal boards would entail a large increase in the medical personnel, which could be supplied only if not only the permanent medical staff of the region was available for boards, but also the specialists attached to the hospitals and clinics, and probably in some cases the medical referees, were available.

Artificial Limbs.

The Committee, upon which several members had served, had made several recommendations, which were being carried out. Perhaps the most important was that an expert committee would review the various forms of artificial limbs at present made with a view to standardization, by selecting the best from each limb. The execution of repairs would be facilitated if every maker could repair every limb. It was proposed that fitting centres should be established in connexion with orthopaedic hospitals throughout the country, and that repair dépôts should be opened in populous centres so that minor repairs could be made in a short time. The question had also been referred to the Committee, to what extent fibre pylons should be supplied and used by men with artificial limbs. He fancied that fibre pylons would take their place alongside artificial limbs much as a slipper compared with a boot, and that a man with an artificial limb, coming home from his daily occupation, would be glad to put on a light fibre pylon. However, that was primarily a surgical question, and he had referred it to the expert committee.

Tuberculosis.

In agreement with the Minister of Health a joint committee had been appointed to investigate the provision made for pensioners suffering from tuberculosis. This committee had now reported, and immediate consideration would be given to their recommendations. In closing the references to the work of the Medical Division, Sir Laming thanked Sir Arthur Pearson for his continuous services to the blind, and he also thanked those people who in various parts of the country were doing splendid work in providing and managing hospitals and homes for the paralysed and disabled. During the Minister's allusion to the blind, several strangers in the gallery—civilians who were blind—made a protest as to the lack of State provision for such sufferers. They were immediately led out by the officials.

The Complaints Section.

The Minister came finally to the report of the Select Committee, which had been issued on the previous day. The Cabinet had already considered it at two meetings, and hence it could not be said that there was delay in decisions upon it. In regard to the proposed special inspection or inquiry department, he could tell the House that a part of this suggestion had operated for several months. He had set up a Complaints Section, and each complaint had been investigated, and a record kept of how long it took for a proper solution to be reached. The Committee went further and suggested that any case not dealt with within a prescribed time should be automatically reported to the department and inquired into. To carry out that suggestion it was essential that there should be proper progress reports from each branch of the Ministry. He had recently appointed a statistical officer to see that such information was forthcoming, and as soon as this was complete it would be possible to work along the lines of the recommendation.

Employment and Training of Discharged Disabled Men.

Of the male staff at head quarters 81 per cent. was drawn from these classes. All new appointments of chief officers of the Local War Pensions Committees were to be made from the same classes.

Independent Appeal Tribunals.

The Government would accept the recommendation of the Select Committee that appeal tribunals should be set up under an authority independent of the Ministry of Pensions. A bill would be introduced as soon as possible to give power to the Lord Chancellor for setting up appeal tribunals as to entitlement. The tribunals would consist of one legal representative, either a barrister or solicitor, who would be chairman of the tribunal, and a disabled officer in officers' cases, and a disabled man in men's cases, with a medical practitioner. Any refusal on the part of the Ministry to a claim for pension on the ground that the disability was not attributable to nor aggravated by military service, or was due to serious negligence or misconduct by the claimant, would be subject to appeal by the claimant to this independent tribunal. Similarly, a widow or motherless child whose claim to pension was rejected on the ground that the death of the officer or the man was not due to military service would have the right to appeal. Thus a statutory right would be granted to assert a claim to pension, and a statutory court independent of the Ministry would be the final judge whether the right existed in a particular case.

Alteration of Assessments.

The Select Committee had suggested that when a man came up for a fresh board and a fresh assessment of pension, he should have the right to go before an independent appeal tribunal to appeal against the medical assessment. The Committee urged that an appeal would be of no use unless the medical men upon the appeal tribunal were more authoritative than the men on the

original medical board. He did not know what proportion of the men the Select Committee thought would appeal, but if one in ten appealed, there would be something like 70,000 in six months, and the delays would be so great that the appeals could not be heard before the pension had expired. Moreover, it would be impossible to get the authoritative consultants and specialists in sufficient numbers to form the appeal tribunal. Reform was not possible on these lines. He agreed, however, that it was wrong for any medical assessor who had not seen a man to alter an assessment made by a board who had seen a man, and he had already stated that as soon as the reasonable organization was complete, medical appeal boards would be set up to which either the man or the department could appeal, in the event of the assessment being challenged. Any outside tribunal dealing with these assessments would cause so much delay as actually to deprive the man of the benefits which the Select Committee desired him to obtain.

In reply to Lieut.-Colonel Ashley, who asked why an independent tribunal should cause more delay than would the tribunals connected with the Pensions Department, Sir Laming said that these tribunals would not be connected with his department. In each region there would be an appeal medical board, which would consist partly of the permanent staff, partly of the staff of hospitals and clinics, and, if necessary, there would be a medical referee, but this would be a totally different class of tribunal from that which the Select Committee suggested. The appeal boards would be constituted by doctors partly on full service and partly stationed and in charge of hospitals and clinics all over the country. They would be available at any moment if they were wanted for a board. It would not be possible, he thought, to get consulting specialists, physicians and surgeons to hold office at the beck and call of any independent tribunals. Having explained the position as to flat-rate pensions, Sir Laming said that the new rates, which would involve changes in pensions and allowances for a million people, could not be brought into operation until about September 3rd.

In the debate Major Cohen (who lost both legs in the war) spoke of the serious delays involved in the procedure of getting an artificial limb renewed when it was obtained from the State. He asked if it would not be possible to adopt some procedure like that used in France. He believed that 75 per cent. of the cases there were of agricultural labourers, and therefore distributed over a wide area. For this purpose the country was divided into various centres, each with its own hospital. All that a pensioner who required anything done to a limb had to do was to go to the local police, purely for identification, and they sent him to the nearest fitting hospital, where the limb was repaired, and he was sent back to work in a couple of days.

Mr. Hogge paid tribute to the administrative ability of the Minister and complimented the Select Committee on their report. He was not, however, altogether satisfied as to the proposals in regard to appeals.

Sir Montague Barlow, who was Chairman of the Select Committee, also confessed that he was not quite satisfied upon what had been said on the question of statutory right. In regard to the regional areas everything would depend upon the type of man who was got to be director. As to appeals on amount, he understood the difference between the Select Committee and the Minister to be as follows—the Committee suggested independent appeal tribunals. The mere constitution of the board did not matter very much. The Committee wanted a lay element, and they wanted doctors, if possible, of superior authority to the doctors of the ordinary board. The Committee suggested tribunals of an independent character, who would sit for the tribunal work alone. The Minister suggested appeal boards, which were really similar to ordinary medical boards, with different names, and that they could sit, whenever desired, because they would consist of the ordinary medical staff of the Ministry. If that were the only possible alternative, it must be submitted to, at any rate for a time, but there was nothing to which the men attached greater importance than free right of appeal to some kind of independent properly constituted authority. The difficulty he saw about the Minister's proposal was this: A board made a finding with regard to a man, assessing him, say, at 50 per cent. disability. The man was not satisfied, and wanted to go to another board. Under the proposals of the Select Committee, assuming them to be carried out, the man would go to an outside authority, who might find against him, but there would be a lay element, and he would feel that he had all possible consideration. Under the proposals of the Minister, the man would go to another board similarly constituted to the boards before which he had already appeared, and not only that, but it was a board which was expressly under the control of the Minister, because it consisted of the ordinary medical staff in the employment of the Ministry, either whole-time men or part-time men. The man would not have the same confidence in such a body as in an independent tribunal. The Committee on Tuberculosis, of which he was deputy chairman, had found that there were some 30,000 to 40,000 tuberculous discharged soldiers. The tuberculous soldier was only one part of the problem of tuberculosis throughout the country, and must fit into the ordinary machinery of treatment. The Committee was of opinion that the sanatorium must be developed, and that training colonies must be made the natural adjunct of the sanatoriums. But the mere provision of training colonies was not enough. Provision must be made for the men discharged from them, and a beginning would be made by providing for the discharged soldier. The only possibility to offer him was either the best possible housing conditions in specially prepared houses, or that the Government should provide permanent village settlements alongside the sanatoriums.

Mr. Hodge, who was Minister of Pensions previous to the change in January, congratulated the present Minister on the success he had achieved.

Mr. W. Graham, speaking with experience of committee work in the south-east of Scotland, said he had come to the conclusion with regret and hesitation that they were probably on the wrong lines in gathering together comparatively large numbers of neurasthenics under one roof, and the same criticism applied with far more emphasis to the cases of epileptics. In fact, efforts in that direction broke down because the patients would not remain together, and the plan had to be abandoned, more or less in despair. He thought the Ministry should devise a system of boarding out the worst cases of neurasthenia.

Dr. Murray said that one of the most cruel duties that could be placed on medical boards was that they should be asked whether a certain disease had, or had not, been caused or aggravated by service in the war. It was not a question that should be put to a medical board. It would save a great deal of heartburning if the Government came to the conclusion that if a man were disabled or died on service from whatever cause, he should be entitled to the same consideration as one in whose case a board had decided that his disability was due to his service. Dr. Murray said that medical board work was new to medical men. The doctors on these boards did not act on their own unaided intelligence—they got orders from above. Many of the criticisms levelled at the individual doctors on these boards, and against individual boards, should be levelled at the Ministry of Pensions, and those who directed them there. Thus the assessment had to be according to percentages, but he thought it would be found that 95 per cent. of the medical men on the boards were inclined to put the most liberal interpretation on the regulations sent them from head quarters. He suggested that a clerk should be provided for the medical board. Too much clerical work was put upon the men who examined.

Sir L. Worthington Evans doubted whether the French system of applying artificial limbs was better than our own, but he was quite alive to the need of a speedier method of getting repairs done. He still felt a difficulty in going further in regard to declaring the statutory right of appeal, but was willing to consider any words that would strengthen the position. With regard to the question of appeal on amount, he said that if he yielded to the request made to him in the debate, the administration would break down.

State Medical Services.

Mr. Lyle asked the Minister of Health, on August 5th, whether any representations had been made to him with regard to the establishment of a State medical service, and whether in that case he would indicate their nature and state whether the Ministry had considered them and with what result. Major Astor replied that several different proposals had reached Dr. Addison from time to time as to new schemes for public medical services. The development of local medical services of various kinds was certainly contemplated by the Ministry of Health, but the opinions of the Consultative Councils would be sought before any substantial steps on these lines were decided upon.

Illness amongst Salonica Troops.—Captain Guest, in a written reply (July 31st), stated that the returns from Salonica during the period from January 1st to July 5th gave an annual ratio for dysentery per 1,000 troops of 16.17 admissions to hospital and 0.27 deaths. Corresponding figures for the previous three years were: 1916—45.7 admissions and 1.01 deaths; 1917—25.6 admissions and 0.61 deaths; 1918—58.6 admissions and 1.00 deaths. All demands for mosquito curtains and nets had been met.

Uncertifiable Mental Cases.—Major Astor, in reply to Colonel Wedgwood, said that the Minister of Health and the Home Secretary were considering the provision of convalescent homes for early uncertifiable mental cases, and it was hoped that legislation on the subject might be shortly introduced.

Tuberculosis amongst Ex-Service Men.—Mr. Parker, on behalf of Dr. Addison, gave Lieut.-Colonel Raw, on August 4th, an assurance that the Minister of Health would at once consider the report of the Special Committee on Tuberculosis amongst ex-service men, and discuss the matter with the Minister of Pensions, who, jointly with himself, appointed the Committee.

HONOURS.

THE following are the statements of services for which the decorations announced in the *London Gazette* of February 15th, 1919 (BRITISH MEDICAL JOURNAL, February 22nd, 1919, p. 227) were conferred:

Bar to D.S.O.

Captain (acting Lieut.-Colonel) James Henry Fletcher, D.S.O., M.C., R.A.M.C., commanding 36th Field Ambulance.

For most conspicuous gallantry and devotion to duty near Mametz on August 26th, 1918, when in command of bearers. With another officer he crawled out under heavy machine-gun fire into "No Man's Land," dragged back two wounded bearers to a more sheltered spot, and after dressing them crawled back for assistance, organized two squads of bearers and brought the wounded men in under heavy fire; also two more wounded men found lying out. He set a splendid example to all serving under him. (D.S.O. gazetted July 18th, 1917.)

Major (temporary Lieut.-Colonel) Francis Cornelius Sampson, D.S.O., 91st Field Ambulance, R.A.M.C.

For exemplary devotion to duty on the night of October 3rd-4th, 1918, at Le Baraque (north of St. Quentin) when this area was heavily bombed. This officer, regardless of personal danger, by his initiative and personal influence organized and accompanied relief parties and was instrumental in the rapid evacuation of the wounded. The bombing was very severe and the casualties heavy, there being thirteen amongst the R.A.M.C. bearers alone; the actual number of killed exceeded forty. (D.S.O. gazetted January 14th, 1916.)

D.S.O.

Captain Patrick Augustine Ardagh, M.C., N.Z.M.C., attached 1st Battalion Auckland Regiment.

For conspicuous gallantry and devotion to duty during an attack east of Masnieres. Being forced to place his dressing station in a spot constantly shelled by the enemy for thirty-six hours, he continued to dress wounded while shells fell on the station. He attended not only his own battalion wounded but men of three other battalions, and worked continuously without sleep all the time. He displayed high courage and resource and was the means of saving many lives.

Major Orvil Ard Elliott, C.A.D.C., attached 5th Canadian Field Ambulance.

For marked gallantry and devotion to duty. As the infantry advanced he followed up closely, and although many times forced to pass through heavy enemy barrages he kept in close touch with the battalions and kept establishing collecting posts as far forward as possible. He was the direct means of saving many lives, and throughout the operations his untiring efforts and disregard for his personal safety were a constant source of inspiration to those about him.

Temporary Major Charles Fraser Knight, 133rd Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty in personally supervising the collection of wounded and visiting forward posts regularly under heavy shell fire. It was largely due to his energy and disregard of danger that the large number of wounded in his sector were successfully cleared. This was during the operation against the Hindenburg line, east of Ronssoy, on September 27th, 28th, and 29th, 1918.

Lieut.-Colonel Stanley Paulin, 11th Field Ambulance, C.A.M.C.

He was in charge of the evacuation of the brigade wounded in the operations about Cambrai. For the five days of that battle he worked day and night with very little rest. He was always leading and directing his men, and by his splendid example was responsible for the wonderful work done by those under him. His work under heavy shell and machine-gun fire was admirable.

Second Bar to the Military Cross.

Temporary Captain George Oliver Fairtclough Alley, M.C., R.A.M.C., attached 2nd Battalion Royal Irish Regiment.

For conspicuous courage, energy, and initiative during the operations on October 8th, 1918, in front of Niergnies. He followed up the battalion in the attack, dressing and evacuating wounded under heavy shelling, eventually establishing his aid post right forward in a section of trench in the rear of the front line. Here he dressed and evacuated wounded, not only of his own battalion and brigade, but of battalions operating on the right and left flanks. Throughout the day he behaved splendidly and by his fine devotion to duty saved many lives. (M.C. gazetted June 4th, 1917; first bar gazetted September 16th, 1918.)

Lieutenant (temporary Captain) William John Knight, M.C., R.A.M.C., attached 89th Field Ambulance.

During the operations east of Ypres from September 28th to October 3rd, 1918, he was in charge of the stretcher bearers attached to a brigade. He led his bearers in the rear of the attacking infantry, dressing the wounded as they fell, and seeing that every case was carried away from the battlefield. During the whole of the advance he showed an utter contempt for danger, dressing the wounded under shell, machine-gun, and rifle fire. Later, when the advance came to a standstill, he established touch with all the regimental medical officers and personally conducted the evacuation of wounded from the regimental aid posts. On many occasions he went forward with stretcher squads to bring back wounded to the regimental aid posts. He displayed great gallantry throughout and did admirable work. (M.C. gazetted May 31st, 1916; first bar gazetted February 18th, 1918.)

Temporary Captain (acting Major) Maurice Aloysius Power, M.C., R.A.M.C., attached 148th Field Ambulance.

For conspicuous gallantry and devotion to duty whilst in charge of bearers during the operations on Niergnies on October 8th, 1918. He personally followed the attacking troops to the final objective, establishing bearer relay posts *en route*, all the while utterly regardless of personal danger though exposed to heavy enemy shell fire. His skilful organization of the evacuation of wounded and his maintenance of touch with all battalion medical officers ensured the speedy evacuation of casualties. He set a splendid example to all ranks under his command. (M.C. gazetted January 18th, 1918; first bar gazetted January 11th, 1919.)

Bar to the Military Cross.

Captain (acting Major) John Bernard Cavenagh, M.C., R.A.M.C.(S.R.), attached 113th Field Ambulance.

On October 1st, 1918, when the advanced dressing station, Cambrai, was shelled, he went out to see about his men and ordered them under cover quite regardless of his own safety. On this occasion he was slightly wounded, but made no mention of it. Again, during the period from October 11th to 15th, when his advanced dressing station at Douvrin was being shelled, he displayed great coolness and courage. Following on this, while advanced dressing stations were in turn established at Berclau, Provin, Camphin, Les-[illegible]roquet, Templeuve, Bachy, Rumes, and Taintignies he displayed great initiative and daring in keeping in close touch with the infantry. It was chiefly due to his sound judgement and coolness during the most trying circumstances that all the wounded and sick were so successfully evacuated. (M.C. gazetted September 17th, 1917.)

Temporary Captain Claude Norman Coad, M.C., 74th Field Ambulance, R.A.M.C.

For great gallantry and devotion to duty when in charge of bearers during the heavy fighting on October 11th between Avesnes and St. Aubert. It was due to his fine personal example and total disregard of danger that over 400 casualties were evacuated on that day. He carried on his work often in front of the forward posts under heavy artillery and machine-gun fire, until all the casualties had been brought back. (M.C. gazetted July 26th, 1917.)

Captain (acting Major) Thomas Frederick Corkill, M.C., R.A.M.C.(S.R.), attached 139th Field Ambulance.

While acting as officer in charge of forward bearers during the operations from September 29th to October 3rd, 1918, south-east of Ypres, he not only showed great resource in dealing with difficult evacuation to advanced dressing station, but a total disregard of danger. He personally frequently visited all posts at all times both night and day with most untiring energy and courage. (M.C. gazetted September 26th, 1917.)

Temporary Captain (acting Major) John Edgar Davies, M.C., 131st Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty at Englefontaine on October 26th, 1918. Hearing that there were 1,000 civilians in the captured town, he volunteered to go into it, interview the mayor, and make the necessary arrangements for the distribution of smoke helmets. He entered the town under heavy bombardment and made his way to the cellar occupied by the mayor, through streets swept by enemy machine-gun fire. Several casualties occurred on the way up to a support battalion, and these he attended to and removed to safety. (M.C. gazetted September 16th, 1918.)

Captain Franklin Fletcher Dunham, M.C., C.A.M.C., attached No. 5 Field Ambulance.

During operations about Neuville Vitasse, August 26th, 27th, and 28th, 1918, for conspicuous gallantry and devotion to duty. He organized stretcher parties under heavy shell fire and located and dressed many wounded. On the 28th the stretcher-bearers under him moved practically with the infantry, and he personally directed the clearing of wounded from "No Man's Land" in daylight, under heavy machine-gun fire. His initiative and coolness were the means of saving many lives. (M.C. gazetted October 18th, 1917.)

Captain (acting Major) Frederick Gamm, M.C., R.A.M.C.(S.R.), attached 2/3rd (Home Counties) Field Ambulance, R.A.M.C.(T.F.).

During the attacks and counter-attacks near Peiziere from September 22nd to 24th, 1918, when it was found impossible to obtain in the village a suitable spot for an advanced dressing station, he took up an ambulance car and used it as a dressing room, working under constant shell fire all the time. His boldness and devotion to duty undoubtedly resulted in the saving of many lives, and the mitigation of much suffering. (M.C. gazetted July 26th, 1918.)

Captain (acting Major) William Clavering Hartgill, M.C., 55th Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty when supervising the evacuation of brigade casualties during the attack on Ronssoy, September 18th, 1918. He early established his various posts and went forward and assisted in clearing wounded of his own and other brigades under heavy machine-gun and shell fire. He worked unceasingly, and it was greatly owing to the co-ordination of the arrangements and his personal supervision that casualties were cleared in a markedly efficient and speedy manner. Throughout he has done fine work. (M.C. gazetted January 1st, 1917.)

Captain (temporary Major) Robert Alexander Hepple, M.C., R.A.M.C.(S.R.), attached 28th Field Ambulance.

For conspicuous gallantry and devotion to duty during the operations at Roulers, Menin Road, and Ledeghem, September 28th to October 5th, 1918. As officer in charge of bearers he worked incessantly day and night, personally keeping in touch with the battalions in spite of shell and machine-gun fire; he never once lost touch with the regimental medical officers, evacuating the wounded with the utmost rapidity, thereby saving numerous lives. (M.C. gazetted July 26th, 1918.)

Temporary Captain (acting Major) Benjamin Knowles, M.C., R.A.M.C., attached 88th Field Ambulance.

For conspicuous gallantry and initiative in charge of stretcher-bearers during operations east of Ypres from September 28th to October 3rd, 1918. He led his stretcher-bearers following a barrage during the attack, and organized relays for his men along the road of evacuation. Later, he visited regimental aid posts, often under heavy fire, and several times took up ambulance cars to casualties, carrying them away under fire. For six whole days he superintended the evacuation of wounded from the forward areas, and it was due to his great energy and disregard of personal danger that the wounded were evacuated without a hitch. (M.C. gazetted March 26th, 1918.)

Temporary Captain Alexander Campbell White Knox, M.C., R.A.M.C., attached 2nd Battalion Royal Sussex Regiment.

For conspicuous gallantry and devotion to duty throughout the operations north and south of the river D'Omignon, from September 18th to 24th, 1918. As medical officer of the battalion he organized and supervised the evacuation of the wounded in the most perfect manner, despite shell fire and gas. Besides superintending the work at the regimental aid post, he personally supervised the work of the stretcher-bearers with the leading waves of the assaulting troops.

Owing to his energy and personal supervision, every wounded man was attended to and evacuated without delay. He did fine work. (M.C. gazetted January 1st, 1918.)

Temporary Captain (acting Major) Harold Dunmore Lane, M.C., R.A.M.C., attached 1/1st North Midland Field Ambulance.

For conspicuous gallantry and devotion to duty. On October 3rd, 1918, during the attack on Ramicourt and Wiancourt, he, who had already done magnificent work during the capture of Bellenglise on September 29th, 1918, and since that date, had worked unceasingly under heavy fire, pushed forward through the enemy's barrage, and, although wounded, continued to search for and dress wounded under heavy shell and machine-gun fire. By his absolute disregard of danger he set a splendid example to the men serving under him. (M.C. gazetted October 18th, 1917.)

Captain John Shaw Mackay, M.C., 12th Field Ambulance, A.A.M.C.

For conspicuous gallantry and devotion to duty on September 18th, 1918, south of Le Verguier. He moved forward with his bearers closely in rear of advancing battalions and under heavy machine-gun and shell fire, and by absolute disregard of his own personal safety was able to keep in close contact with brigade regimental medical officers. By this action the wounded were evacuated in the quickest possible manner, all congestion at regimental aid posts was prevented, and undoubtedly many lives were saved. (M.C. gazetted January 18th, 1918.)

Temporary Captain James David MacKinnon, M.C., R.A.M.C., attached 4th Battalion Liverpool Regiment.

During the operations on September 29th and October 10th-11th, 1918, at Villers Guislain and Le Cateau, he displayed consistent and conspicuous gallantry in attending to wounded under heavy fire, and saved many lives. His example of coolness and devotion to duty was very fine. (M.C. gazetted September 16th, 1918.)

Captain (acting Major) William Archibald Miller, D.S.O., M.C., R.A.M.C.(S.R.), attached No. 6 Field Ambulance.

For conspicuous gallantry and devotion to duty from September 27th to September 29th, 1918, when in charge of stretcher-bearers during the advance from the Canal du Nord to the Canal de St. Quentin. He worked for three days without rest, and repeatedly led his stretcher-bearers to the front line, exposing himself to direct fire from enemy machine-gun posts. Especially on September 28th, he led his bearers across the canal in close touch with the infantry, and brought back wounded through intense machine-gun and shell barrage. By his fine behaviour he saved the lives of many men. (M.C. gazetted November 14th, 1916.)

Captain Laurel Cole Palmer, M.C., 13th Field Ambulance, C.A.M.C.

In the operations before Cambrai he was in charge of stretcher-bearer squads from September 27th to September 30th, 1918. During this period he had absolutely no rest day or night, and was constantly under heavy shell fire; and on the 28th he personally brought up field ambulance squads, and carried out the wounded from in front of the front line under heavy shell and machine-gun fire. His untiring energy and disregard of personal danger were admirable. (M.C. gazetted February 1st, 1919.)

Captain Joseph Gregor Shaw, M.C., 12th Field Ambulance, C.A.M.C.

During operations near Cambrai from September 26th to October 1st, 1918, he was in charge of a party of stretcher-bearers clearing the 12th Canadian Infantry Brigade. He went for four days practically without sleep, during which time he was constantly superintending clearing operations in the vicinity of the regimental aid posts. After two days, his senior officer having been gassed, the total responsibility devolved upon him. During this time, while constantly exposed to shell and machine-gun fire, his conduct was splendid, and he was the means of saving the lives of many wounded. (M.C. gazetted February 1st, 1919.)

Captain (acting Major) James Calvert Spence, M.C., R.A.M.C. (S.R.), attached 34th Field Ambulance.

For conspicuous gallantry and devotion to duty while in command of a bearer division, during the attack on Oisy le Verger and the subsequent operations from September 28th to October 2nd, 1918. In addition to handling his bearers with marked skill and initiative, he reconnoitred and selected sites for regimental aid posts under heavy fire. Throughout the operations he showed untiring energy and complete disregard of danger. His fine leading of bearers on several occasions through heavy barrages enabled the wounded to be rapidly cleared, and undoubtedly resulted in the saving of many lives. (M.C. gazetted September 17th, 1917.)

Captain Donald George Kennedy Turnbull, M.C., 11th Field Ambulance, C.A.M.C.

During the recent operations before Cambrai, September 29th, 1918, it was reported that there were still a great many wounded out in front of the regimental aid posts of another brigade. He at once proceeded up the line with all available bearers and under heavy fire investigated the conditions as to wounded. He got them all out so that none were left during the night of September 29th-30th, thus assisting materially in preventing deaths from exposure. (M.C. gazetted July 26th, 1917.)

(To be continued.)

Order of the British Empire.

The following officers of the Royal Navy have been appointed Officers of the Military Division of the Order of the British Empire (O.B.E.) in recognition of services during the war:

Surgeon Lieutenant Commander Roger Aiken Rankine, R.N.

For valuable services in connexion with anti-malarial work at the British Naval Base, Corfu.

Surgeon Lieutenant George William Marshall Findlay, R.N.

For valuable services as Medical Officer of the Royal Naval Dépôt, Port Said.

England and Wales.

In-patient Accommodation for Bristol Pensioners.

From the report of the meeting of the board of guardians it appears that Bristol is not to have a hospital for the in-patient treatment of pensioners, as the Office of Works had decided that the buildings at Southmead are not suited for a hospital as far as the temporary hutments are concerned, while the guardians required the permanent buildings for the accommodation of sick poor. The Ministry of Pensions, with which the guardians have been in correspondence, appears to think that suitable accommodation for the pensioners can be found at Bath, presumably at the War Hospital.

The history of Southmead Hospital is as follows: In August, 1914, the board of guardians had nearly completed a new infirmary, and when the great demand for more beds for wounded and sick soldiers came the War Office by arrangement took over the new building, attaching it to the 2nd Southern General Hospital as a section, thus providing about 1,240 beds. To provide this large number of beds temporary hutments of the hospital type were put up, and it is these additions which the Office of Works finds unsuitable without considerable alterations. Southmead has been for a considerable time a special surgical hospital for orthopaedic cases. On the dispersal of the medical staff of the 2nd Southern General Hospital the personnel was found from Territorial and temporary commissioned officers of the R.A.M.C., and from July 1st has been nominally under the Ministry.

It would appear from the published account of the board of guardians' meeting that they found some difficulty in getting a definite statement from the Ministry as to the date when the infirmary they had just built would be returned to them, and it may be conjectured that the rather precipitous action of the Ministry is due to the pressure brought by them for an answer. This is evident from the proposal to send pensioners requiring indoor treatment to Bath. That city has a well equipped war hospital of the hutment type, but it is twelve miles from Bristol, and it would appear more fitting that the city of Bristol, with its 20,000 pensioners, should have accommodation of its own for its own men. Further, the unnecessary delay, inconvenience, and risks caused by a journey of only twelve miles for men requiring indoor treatment seems not to have been taken into account; and the change is felt to be a slight to those who have been in charge of the hospital for the past four years.

As a matter of fact, the buildings used by the 2nd Southern General Hospital at the Royal Infirmary are still unoccupied and, if current report be true, are likely so to remain for some time, as it is doubtful whether the Committee can afford to open the wards again at present. These wards require considerable repairs and cleaning, but they are not in an unusable state. It does not appear that the Committee of the Royal Infirmary has been approached on the matter, though it is almost certain that if they were, a working agreement could without any difficulty be reached. Perhaps the worst part of the whole matter is the state of uncertainty and ignorance in which those who have to do with the matter of treatment of pensioners are kept, for the communication on the giving up of Southmead and the provision of some other hospital has been between Major-General Bond, representing the Ministry, and the board of guardians, while the Pensions Committee have heard not a word. The local Commissioner appears to be in the same position as the Pensions Committee.

The University of Liége has conferred the honorary degree of doctor on Her Majesty Queen Elizabeth of Belgium.

Senator Francesco Durante, who has held the chair of surgery in the University of Rome for forty-six years, has retired under the age rule on completing his seventy-fifth year. He delivered his final lecture on June 6th to an audience which included all his colleagues, the Rector magnificus of the University and the Director-General of Higher Education representing the Minister. A fine bust, from the chisel of the distinguished sculptor Ettore Ximenes, presented by Professor Durante's pupils, has been placed in the great hall of the Policlinico.

Correspondence.

A POST-GRADUATE SCHOOL IN LONDON.

Sir,—I have read with great interest the letter which appears in your issue of August 2nd, p. 150, signed by "Observer." It expresses what has been in the minds of many of us for months past, for we have noted with disappointment and regret the valuable time that has been spent—I might say wasted—by the gentlemen who have, I think, for over two years been considering and planning how a really national scheme for post-graduate training could be established in London. Schemes have been devised, revised, and re-revised, but no businesslike steps have been taken to realize any of the schemes. A few months ago we hoped that at last they would "get a move on," for a well-attended meeting of really representative people was held in the Royal Society's house, presided over by Sir William Osler, and beautiful resolutions were formulated and carried with acclamation.* The meeting, I believe, formed itself into a "Post-graduate Association," and appointed an executive committee, but is there such an association in any recognized understanding of the word? Indeed, has anything effective been done since that meeting? I believe I am right in saying that nothing has been done beyond further talk. Had the project been in the hands of really businesslike men with power of organization the post-graduate school might have started within three months of the first proposal. *Vires acquirit eundo*, and it would have been infinitely better to have made a start, no matter how humble, in faith that the thing would grow, instead of waiting until an ideal scheme could be elaborated in every detail, which only time and experience could prove to be of real value.

The profession is indebted to the Royal Society of Medicine, which generously gave its hospitality to the Fellowship of Medicine, a committee of which, when the call came about last Christmas for post-graduate work to be arranged for returning army medical officers, made a start in about three weeks, and as most of us know, with brilliant success. If the *soi-disant* Post-graduate Association had more at heart the tremendous importance of London being recognized as a great post-graduate centre rather than the realization of their own dreams and schemes, and if, recognizing that however distinguished they might be professionally, they are not organizers, and would hand over the whole thing to the Fellowship of Medicine, many of us feel sure there would be a businesslike post-graduate scheme in full working order by the beginning of October. If something practical is not done at once the London profession will have lost an opportunity that will probably never recur, and while we would rather see post-graduate centres in New York and in Paris than in Vienna and Berlin, post-graduate students will have lost probably for ever the opportunities which London possesses for such work—greater than any city in the world.—I am, etc.,

London, W., Aug. 1st. W. Arbuthnot Lane.

Sir,—Your correspondent, "Observer," rightly urges that we will lose the unique opportunity in our history of making London a great post-graduate centre if we do not promptly establish a full and permanent curriculum of study and instruction.

Not only is New York enlarging and organizing her post-graduate instruction, but Philadelphia and other cities are preparing schemes of study for the post-graduate, either separate from graduate classes or in the same institutions as the latter. The prospect of success of these ventures is enhanced when we recollect (1) the abounding prosperity of America at present, (2) her population of 100 millions, with a proportionate number of medical men, (3) the eagerness of these latter for instruction and for "keeping up to date," (4) their readiness to pay well for value received, (5) the great facilities in U.S.A. for obtaining cadavers for technical training and for operative surgery, and (6) the liberality and patriotism with which wealthy American citizens give pecuniary support to teaching and research.

But all this, even if very successful, would not militate against thorough and well organized teaching in Europe. All Americans have a strong and very natural desire to see and study in the schools on this side, and it adds to their reputation to have enlarged their views and experience by crossing the Atlantic. At the present time, in spite of anything the yellow press or politicians for their own ends may say to weaken it, there exists, in all the professional circles I mixed in during a recent two months' visit, the very warmest feelings of esteem, admiration, and affection for British medicine and surgery, as well as for its exponents, its literature, and its history. Those American colleagues who have mixed with us here or in France during the years of war are loud in their expressions of appreciation of our good fellowship. I have heard them not only in England, but even more warmly enunciated in America. Transatlantic *confrères* who have come here in former years, duly accredited or with letters of introduction, are equally warm in their gratitude for the welcome given them, and for the wealth of clinical and pathological material made available for them. But some of the rank and file, on the other side, occasionally, but courteously, gave me to understand that they had received nothing but "the cold shoulder"; that there was nowhere for them to apply for information on any matter of medical interest; that they found no organized classes; that they lost much time in wandering from one hospital to another; and that, not infrequently, after many futile efforts, they packed up and went on to Vienna or Berlin. One of the leading surgeons in Canada told me that, wishing to learn the technique of cystoscopy, he came—naturally—to London. There he spent three weeks in trying to get the necessary instruction and practice, but, meeting with no success, he went on to Berlin, where, in three weeks and for a fee of £6, he obtained the teaching and the training he was in search of.

No Canadian and no American I met ever wants to enter a Berlin or a Vienna clinic again, *if* he can get what he requires in this country. It is therefore entirely "up to us" not to throw away this great occasion. If we lose it we will have only ourselves to blame. A Canadian physician, who is connected with the largest medical school in his own country, who has been over here for four and a half years on war service, and who therefore knows well the conditions on both sides of the ocean, assures me that if we do not seize this moment he is certain that within five years the post-graduate classes of Vienna and Berlin will again be crowded, chiefly by English-speaking students.

But the opportunity is not lost, and has not been neglected. The Fellowship of Medicine, which aspires to other duties as well, has by its emergency post-graduate scheme so well satisfied the 400 surgeons of the Dominion and American armies who have registered at No. 1, Wimpole Street, since the beginning of this year, that they are returning to their own countries full of gracious gratitude for what it has been possible to do for them under the still present difficulties of war's aftermath. The Post-graduate Association has worked out plans for the difficult task of co-ordinating the various and detached teaching interests of London. Had the armistice not come upon us rather unexpectedly, these plans would doubtless have advanced to a practical programme. Now, it only requires the amalgamation of these two efforts—namely, the temporary scheme of the Fellowship and the broad-based plans of the Association—to secure a united front and a successful effort. There is certainly not room for two ventures, and we have learnt from the war by the failure of unconnected efforts to appreciate the motto of Belgium—"L'union fait la force."

The first steps in this amalgamation have already been taken. When it is completed the profession can unite in supporting it, and in appealing to the Government and the public for helping what can most certainly be called a "work of national importance."—I am, etc.,

London, W., Aug. 5th. StClair Thomson.

THE TEACHING OF MEDICAL HISTORY.

Sir,—The broad issues of historical research, the discussion of methods to make plain the significance of those who *quasi cursores vitai lampada tradunt*, must be left to such scholars as Dr. Singer, but I can, without presumption, support his plea for other reasons.

In the ten years during which I have had charge of the

* The proceedings of the meeting were reported in the British Medical Journal of May 3rd, 1919, p. 551.

department of medical statistics at the Lister Institute many young post-graduate students have carried out epidemiological researches in the laboratory. My experience has been that the student realizes quite well the importance of statistical methods and the necessity of familiarizing himself with the current literature of the disease which he intends to investigate epidemiologically; but it has seldom, if ever, occurred to him that the past history of the disease is an equally essential datum. Yet an epidemiologist whose backward vision is limited by the year of the discovery of the tubercle bacillus is not in a better position than that of a would-be jurist who attempted to deduce the general principles of law from an exclusive study of the current practice of the courts.

This is not the fault of the student; not only does he hear no lectures, there are very few books which can safely be put into his hands. For the beginner, Hirsch or the third volume of Haeser's treatise are but dull reading; Creighton's book, although as interesting as a novel to any young man with a sense of style, is not an altogether safe guide.

The evil results of all this we see every day in the multiplication of new and mysterious diseases, the easy contempt of classical researches which have not found a *sacer vates* in the epitomists of current journals, and the vulgar clap-trap of conquests and stampings out of diseases. Sir Clifford Allbutt has again warned us that we are mainly engaged in the manufacture of technicians, and the technician whom Sir Clifford censures is the modern representative of that Athenian blockhead who, as Dr. Johnson said, was the greatest of blockheads. It is possible that historians themselves are not altogether guiltless in this matter. Perhaps some of them do not do enough to dispel the notion that medical history is a sealed book to all who cannot read Hippocrates in the original, while the cant that we can find the solution of all our riddles in the pages of Hippocrates or the writings of Sydenham is not much more respectable than that which proclaims bacteriological millennia and the worthlessness of past experience.

Surely it is possible even now and without the creation of much new academic machinery to save the medical student from the extremes of sciolism and bookishness. When he has completed his course in the pure sciences and before he becomes immersed in matter, acquiring the technical knowledge which enables him to practise the art of the physician, surgeon, or pathologist, he might be offered a short course of lectures on the history not so much of medicine in general as of diseases, the decline of plague, the rise of the continued fevers, the ups and downs of the zymotics, the strange story of the agues and influenzas. This is a humble proposal and its execution could not do much to foster scholarly research; but we must not let the best become the enemy of the good.—I am, etc.,

Loughton, Aug. 4th. MAJOR GREENWOOD.

HYPERPYREXIAL HEATSTROKE.

SIR,—With reference to Captain Sinderson's letter (BRITISH MEDICAL JOURNAL, July 19th, 1919) regarding a possible connexion between hyperpyrexial heatstroke and sandfly fever, I would like to mention that I have repeatedly met extensive outbreaks of this type of heatstroke under conditions which entirely excluded the possibility of sandfly fever playing a part in its causation—namely, on the transports which brought the British troops direct from England to Mesopotamia in August, 1917.

In one of these instances the ship had left Durban fifteen days previously, and had made a non-stop run to the Shatt-el-Arab lightship in the Persian Gulf. Since Capetown and Durban were the only ports of call, and no outbreak of any febrile disease had occurred during the whole voyage until the heated regions at the mouth of the Shatt-el-Arab river were reached, it might be fairly concluded that neither sandfly fever nor malaria played any complicating part in the heatstrokes which marked the termination of this voyage.

Sandfly fever is accompanied by very definite and unpleasant symptoms, which were entirely absent from the large majority of my cases of heatstroke in Mesopotamia.

The after-fever, which often follows heatstroke, has come to be regarded as evidence that the disease is toxic in nature, but it must be remembered that absolute suppression of sweating often persists for one or two weeks after the attack, and this state of affairs, combined with the presence of a high atmospheric temperature (and certain physiological factors) will fully explain the continuance of the pyrexia.

In ordinary fevers, too, if sweating is not already evident, a subcutaneous injection of pilocarpine will be followed by profuse diaphoresis. In heatstroke, on the other hand, pilocarpine is powerless to produce sweating, though copious salivation takes place. From this I conclude that some damage (probably of the nature of fatigue through previous over-sweating) has occurred to the sweat glands themselves, which prevents their action veen when stimulated by the most powerful diaphoretic known.

There can, of course, be no doubt that any febrile condition complicating heatstroke will hasten the onset of hyperpyrexia, and I have seen a considerable number of cases in which sandfly fever has done so, but there is much evidence to support the opinion that heatstroke is a distinctly separate clinical entity, due to failure of the sweat glands, and is not necessarily associated with sandfly fever, malaria, or any other febrile disease.—I am, etc.,

Hull, Yorks, Aug. 2nd. K. G. HEARNE, M.D.

THE PANEL CONFERENCE.

SIR,—I have now attended several Conferences of Panel Committees, including the last, and each successive Conference has strengthened the impression the first of them made on my mind of the futility of these unwieldy meetings as a means of arriving at wise decisions either on medico-political policy or, indeed, on details of medical administration.

The shortness of the period that can be given to them, the overburdening of the agenda, which is probably unavoidable, the jumble in that agenda of trivial administrative details, which, nevertheless, give rise to long and useless discussion, with important principles of policy whose consideration has perforce to be rushed; the clashing of opposing views which tends to make delegates more desirous of scoring a point than of contributing to the discussion only what will help the Conference to arrive at the wisest decision—all tend to create an atmosphere in which wise deliberation is difficult, if not impossible.

It is true that some improvement might be effected if the agenda were so arranged that important matters of principle were taken first and administrative details left until afterwards, and if, where there are several similar motions or amendments, the best were picked out for discussion. I endeavoured at the last Conference to get the Conference to agree to this, but it decided otherwise, with the consequence that some members of the Conference had to leave before some of the most important matters on the agenda paper were reached.

I believe that it would not have so decided had not the Chairman misled the Conference by saying that time would probably be saved by taking the agenda as it stood. I use the word "misled" in no opprobrious sense, as no one appreciates better than I what a really fine Chairman Dr. J. A. Macdonald is.

Such arrangement of the agenda could easily be made by a very little careful work before the Conference. A small committee of two could do it in half an hour.

But even were the agenda perfectly arranged, and the discussion perfectly managed, the unwieldy character of these Conferences make them a quite unsuitable instrument for deciding the policy of the medical profession. The delegates come from all parts of the country, from areas which have hardly any knowledge of what other areas are doing, or how they are thinking, and but little opportunity of getting this knowledge.

The remedy is, I believe, to abandon these regular Conferences as instruments for determining policy, and to make use of them exceptionally only to register decisions if necessary on some few questions of principle only, and to organize the profession on a sectional basis, as shown forth in skeleton form in the plan of organization projected by the Association of Panel Committees.

It is not yet certain what body is finally to be the mouthpiece of the medical profession, or if there may not be more than one body to deal with different matters. But whatever it is to be, I believe that two things are necessary

to make it a success in the struggle that is before the profession:

1. That it should adopt this sectional organization.
2. That the profession should put its hands deep into its pockets and finance it not only adequately but generously.

I enclose a copy of the Explanatory Memorandum of the Association of Panel Committees in the hope that you may find it worthy of comment, but for the benefit of your readers who have not seen it and may not see it, may I condense its most important provision:

The country is divided into sections; seven are suggested.
Each Panel Committee appoints delegates, who attend a sectional conference once annually.
The principal function of this conference is to appoint a sectional committee.
The sectional committees will meet frequently and will each appoint a member of the Central Executive.
This Central Executive will be the negotiating body, but from its very nature it must be in close contact with sectional committees, so that matters of policy as well as of administrative detail must perforce be thrashed out in the sectional committees.

It is a very different matter to deliberate on such things in comparatively small and compact committees which meet frequently, and whose members know each other, from tossing them over in an unwieldy, disjointed annual Conference.

When necessary in a crisis, and to register a decision on some single important issue, the summoning of all the sectional committees together would in effect be to summon a body comparable to the present Conferences, but it would be a very different and much less unwieldy instrument.

This plan has the merit that it is applicable to any representative body. The Insurance Acts Committee could be elected on this plan and take instructions from, and refer matters to, its constituent bodies in this way.

It is high time the profession thought about these matters, as time is pressing, and the Ministry of Health and reconstruction of the Insurance Acts is urgent. I trust that you may consider this a sufficient excuse for this long letter.—I am, etc.,

York, July 28th. PETER MACDONALD.

SIR,—Dr. P. Macdonald has courteously allowed me to see his letter, and I hope you will permit me to make a few observations upon it. Dr. Macdonald is sincerely anxious to make the Conferences of Panel Committees as useful as possible, and to put them into proper relationship with all other means of consultation that the profession may possess. The Insurance Acts Committee shares this anxiety. This consultative machinery has not yet acquired its final form. It is still in process of evolution, and all sincere efforts to help it to perfection must be welcomed.

There are two aspects to be considered—(1) the conduct of the business of the Conference itself, (2) the relationship of the Conference with the Panel Committees on the one hand and with the executive body (the Insurance Acts Committee) on the other. Neither of these is so simple as Dr. Macdonald would have it appear. In connexion with the former, for instance, the "small committee of two" which he asks for actually sat to arrange the agenda of the last Conference for much more than the "half an hour" which he considers necessary, and the result, though the Conference as a whole accepted it, failed to satisfy an important minority. The difference between "important matters of principle" and "administrative details" as applied to individual motions is not always viewed alike. But I agree, and I think the Insurance Acts Committee would agree, that, if this difficulty could be got over, it is desirable that the main purpose of the Conferences should be to register decisions on important questions of principle in connexion with medico-political matters which had previously been considered by Panel Committees individually or in groups, rather than to debate details concerned with the application of such principles. To this I believe we shall come when individual practitioners have learnt to make more use of their Panel Committees, and when those committees have learnt more adequately to consult their own constituents and neighbouring committees.

This brings me to Dr. Macdonald's "sectional" or, as I prefer to call it, "group" organization. Some two years ago the Insurance Acts Committee decided that some such organization was necessary, and it was one of the important points in the programme of the Association of Panel Committees which a few committees formed a little later. The Insurance Acts Committee has divided Great Britain into some thirteen regions, and has encouraged the co-operation and consultation with each other of the Panel Committees within each region. The "sectional organization" laid down in the scheme of the Association of Panel Committees is not very different from the group arrangement of the Insurance Acts Committee, but the Committee has preferred to allow each group to develop its method of co-operation on the lines which seemed best in the local circumstances rather than to impose from the centre any particular method. As a fact, several different methods are now in being, and a little longer time will enable us to determine which are the most useful and convenient. Grouped conferences will almost certainly become a more important feature of our organization.

As Dr. Macdonald states, in the scheme of the Association of Panel Committees each of the sectional conferences, composed of delegates from the Panel Committees in the section, appoints a sectional committee, and each sectional committee appoints a member of the Central Executive. In this case the executive is only in a fourth-hand relationship with insurance practitioners, and is in no relationship at all with those sections of the profession who, though they must be affected by a State insurance scheme, are not actually working under it. In the organization which has grown up under the auspices of the British Medical Association, on the other hand, the executive committee of the Conference is only two removes from the insurance practitioners themselves, being directly elected (as to a majority of its members) by the members of the Panel Committees in each group; and it contains in addition an important representation of the British Medical Association as the most widely representative body in the profession, and of certain other important professional organizations. I think it may now be said that the latter method of organization has proved its worth, and has commended itself as the most useful and appropriate to the great majority of Local Medical and Panel Committees.

Under these circumstances, is it too much to ask Dr. Macdonald to unite his forces whole-heartedly with ours, so that together we may improve both the conduct of the business of the Conference and the representative character of its committees, and so that the funds on which, as he states, its success so largely depends, may be generously supported and placed on a firm basis?—I am, etc.,

London, N., July 29th. H. B. BRACKENBURY.

INSURANCE TERMS AND CONDITIONS.

SIR,—The extra payments for 1919 on the ground of the increased cost of living, having been approved by the Panel Conference, are probably beyond discussion; but, in view of its bearing on the settlement for 1920, it is important that all possible explanation of this approval should be given to members. The payments are distinctly less than those made to civil servants of similar incomes. Presumably this is in accordance with the principle, enunciated in the fifth quarterly circular, that a proportion of our panel income must be deducted, as representing expenses, before the true net income can be found. This, of course, is true. But these expenses have themselves increased in much greater proportion than the maximum extra allowance of 30 per cent. It seems to follow, therefore, that if the amount estimated as expenses is not to count in reckoning the extra grant it should be the subject of another and larger grant. I am quite aware that the Association was unable to produce detailed statements of the increased cost of urban practice, but the main items are well known. They are motors and running costs, service, cleaning material, redecorations, rent, and rates. Rates have gone up about 30 per cent.; all the others, except rent, have gone up by 70 per cent. or more. There should be no difficulty in fixing a rough average percentage for these expenses, and making a grant accordingly. If neither this special grant be given nor the "expenses" be allowed to share in the 15 per cent., it does seem that our net income for 1919 (before the addition of the 15 per cent.) will be actually less than the net income for 1913; so that even if 15 per cent. on our gross incomes be the true equivalent of 20 per

cent. on the civil servants' net incomes, we shall still be worse off than they by this reduction in our net incomes—and even the civil service increase is by no means equivalent to the rise in the cost of living.

Probably this point has been considered, but an explanation would be comforting.—I am, etc.,

Newcastle-on-Tyne, July 27th. T. L. BUNTING.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

SIR,—As one of those who started the discussion of this subject in your issue of June 21st, I am greatly interested in the letters which continue to appear.

All honour to the men who volunteered for service; they deserve to be well treated, and to have it made up to them now they have returned. I do not think, however, that the Territorials and others who were compelled to join up can claim to be in the same category as the volunteers. While it was a hardship and a loss for some men to join the army medical service, it was an advantage for others, and there were many men, only just qualified, who profited thereby. Would they prove as satisfactory as those who have worked on those boards for nearly two years?

Let me give some particulars of my own case. I am a country doctor, over sixty years of age, and my residence is fourteen or fifteen miles from the county town. I was one of the first to join the recruiting board when it was thrown open to civil practitioners in November, 1917. I took two sessions a week, and generally worked the full two and a half hours at each session, which necessitated an absence from home each time of four and a half hours. Since recruiting stopped I have had one session a week on the pensions board, with occasionally a second. We always have a list of ten cases to examine, but sometimes one or two do not turn up. As a rule no member of the board has more than two sessions a week, and all demobilized men are given a chance to join. The clerical work used to be undertaken by the clerks, but some time ago it was ordered by the Ministry of Pensions that members of the board should perform this duty.

Now, Sir, I have given particulars of my own case; I do not think that I am injuring very much those who have served.—I am, etc.,

MEMBER OF RECRUITING AND PENSIONS BOARDS.

July 28th.

*** Our correspondent will see that one aspect of this matter was discussed at the Annual Representative Meeting (SUPPLEMENT, p. 49), and that a resolution was adopted to the effect that the minimum fee should be two guineas for each session not exceeding two and a half hours, and that the number of pensioners examined at one session should not exceed eight.

THE NEW R.A.M.C. CONTRACT.

SIR,—As one who joined the R.A.M.C. during the first year of the war, perhaps I may be allowed to make a few remarks on the present state of affairs. As you rightly remark in your leading article on this subject in your issue of August 2nd, the present difficulty is largely due to the action of Mr. Winston Churchill in scrapping early in the year, suddenly without consultation with the medical profession, the scheme for demobilization which had been carefully worked out by the Central Medical War Committee. His excuse appeared to be that there was a great shortage of civil medical practitioners, but, like many others who were demobilized in January last, I did not find this to be the case.

I cannot help feeling that one of the great obstacles—probably the greatest obstacle—to medical men joining or rejoining the R.A.M.C. is distrust of the War Office. It must be remembered that the country is not now at war, and so appeal cannot be made to the patriotism of the medical profession. No doubt the authorities thought that £550 a year would have attracted the newly qualified men, but, on the other hand, those men who join are not certain of a year's service, and, moreover, they may have to serve in any part of the world, with the risk of contracting malaria and other tropical complaints; and, above all, they have to remember that the time they will spend in the R.A.M.C. will be almost entirely wasted, the little experience they will gain being of small value to them in after-life, while during their period of service they will miss any chances of competing for public appointments.

As regards those men who have served, I think I may say that the majority joined up for patriotic motives; they did not for many reasons like the service; they felt that they were not treated with the consideration they deserved, and they resented the discipline enforced often by men who were their inferiors as regards professional knowledge, although their seniors, owing to their being regular officers in the R.A.M.C.

The greater number of these men having once returned to civil life, with wives and families to provide for, and having recommenced to pull their practices together or to get into their hands the threads of the duties of their public appointments, are not at all likely to rejoin, especially to be paid at the same rate as the newly qualified man who has had no army experience. This leads me to mention an old-standing grievance—namely, the system whereby all temporary officers were and are paid alike. It is extraordinary that in the eyes of the War Office every medical man, no matter if he be just qualified with any qualification or has the highest qualification, and perhaps twenty years' experience, is of equal value.

What are the remedies for the present difficulty in obtaining temporary medical officers? It appears to me they are:

1. Let all officers be engaged for a period of at least one year.
2. Allow all officers to leave the service (terminate their contract) on giving a month's notice if they obtain a public appointment or have exceptionally urgent private reasons. They will thus not be debarred from competing with their fellows in civil life.
3. Let the newly qualified be given the rank of lieutenant and the pay offered be £500 per annum.
4. Offer demobilized officers who have served less than three years the rank of captain and £600 per annum. Pay of temporary captains serving to be £600.
5. Offer demobilized officers who have served to the satisfaction of their superiors in the R.A.M.C. for at least three years, and those who are still serving and who have more than three years' service, pay at the rate of £700 a year, the rank of major, and responsible posts for which they are best fitted—for example, as specialists, or in charge of divisions as registrars, etc.

Those entered as captains might also possibly provide some specialists. The present scheme does not appear to make any provision for obtaining the services of specialists, which is a most important point.

I have good reason for thinking that if the five suggestions enumerated above were carried into effect sufficient temporary officers would be obtained, for, after all, with many men there is the feeling that money is not everything, and any way, to me the honour of holding His Majesty's commission even is a great attraction.—I am, etc.,

August 5th. EX-SERVICE MAN.

SIR,—I quite agree with your correspondent of August 2nd. Why not make up the difference in pay received by Territorial and Special Reserve M.O.'s for the last four and a half years or so to that received by the temporary officer. It certainly would stimulate confidence in the Government, which I personally have lost.

I might mention a concrete example. I joined the Special Reserve in 1914, and have been on their rates of pay up to date. My brother qualified in 1915, and has a temporary commission, and although he is younger and more recently qualified, has drawn more pay since than I have.

When Government rights the wrongs which it has connived at so long, it might get more support from demobilized and new men. My advice to any aspirant will be, "Timeo Danaos et dona ferentes."—I am, etc.,

Blackley, Aug. 5th. J. G. BENNETT.

SURGICAL INSTRUMENTS FOR SERBIA.

SIR,—May I make an appeal through your widely read JOURNAL to medical men and surgeons for instruments of any sort and description to assist in the re-establishing of hospitals in Serbia? I have just returned from relief work in that ruined country, and have had ample opportunity of seeing the great need for every kind of help required.

Many doctors have been posted to various places only to find no hospitals and a complete absence of medical instruments and requisites of all descriptions; it has occurred to me that if your readers would overhaul their cupboards

they could find many instruments they could spare, and thus help one of our bravest and most faithful allies. I will undertake to personally distribute any gifts, and here render most grateful thanks to kind donors.—I am, etc.,

E. HAVERFIELD,
Commissioner for Serbian Red Cross.

Serbian Red Cross Society in Great Britain,
9, Ennismore Gardens, S.W.7.

Universities and Colleges.

UNIVERSITY OF LONDON.

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL.

THE following elections to scholarships have been made:

Burney Yeo Scholarships: J. W. Hirst, C. F. T. East. Senior Scholarship and Todd Prize: E. A. L. Crichlow. Jelf Medal: H. Kamal. Tanner Prize: Miss D. E. P. Jolly.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

The following appointments have been made:—Lecturer in Anatomy, and Head of the Anatomy Department: Mary L. Keene, M.B., B.S. Demonstrators of Anatomy: John W. Ebden, M.B., B.S., Lawrence Abel, M.B., B.S., Mary Hounsfield, M.B., B.S., Mary Joll, M.D., B.S. Lecturer in Forensic Medicine and Toxicology: Bernard H. Spilsbury, M.B., Ch.B. Demonstrator in Pharmacology: Eleanor Scarborough, M.B., B.S. Demonstrators of Physiology: M. Ross-Johnson, D. Woodman, B.Sc.

The following scholarships have been awarded for session 1919–20:

Isabel Thorne Scholarship: K. H. Bowman-Manifold. Agnes Guthrie Dental Bursary: Kathleen C. Smyth. Gilchrist War Workers Scholarship: G. M. L. Summerhayes. Sarah Holborn Scholarship: Annie Sydenham. Dr. Margaret Todd Scholarship: Greta Hartley. Bostock Scholarship: Lucy Parker. St. Dunstan's Medical Exhibition: M. Pedersen. Mrs. George M. Smith Scholarship: Agnes H. S. Gray. Mabel Sharman Crawford Scholarship: Lucy Parker.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary comitia of the Royal College of Physicians of London was held on July 31st, the President, Sir Norman Moore, Bt., being in the chair.

On the report of the Censors Board, it was resolved that Arthur Edward Gladstone be declared to be no longer a Licentiate of the College.

Dr. Frederic Percival Mackie was admitted to the Fellowship of the College.

The following gentlemen, having passed the required examination, were admitted Members:

Thomas Beaton, M.D.Lond., L.R.C.P., Cecil Clinton Birchard, M.B.Toronto, Reginald St. George S. Bond, M.B.Edin., Maurice Davidson, M.D.Oxon., L.R.C.P., Alan Worsley Holmes a Court, M.B.Sydney, Arthur Edwin Horn, M.D.Lond., L.R.C.P., Sydney Fancourt McDonald, M.D.Melb., Douglas Murray McWhae, M.D.Melb., Thomas Archibald Malloch, M.D.McGill, Ludlow Murcott Moody, M.B.Lond., L.R.C.P., Julian Lionel Priston, M.B.Lond., L.R.C.P., Archibald Cathcart Roxburgh, M.B.Camb., L.R.C.P., Joseph Wilkie Scott, M.D.Glasg., Frank Shufflebotham, M.D.Camb., Eric Clarence Spaar, M.D.Lond., Robert Maxwell Trotter, M.D.Aberd., William Balcombe Winton, M.D.Camb.

Licences to practise Physic were granted to 78 candidates, and diplomas in Public Health were granted in conjunction with the Royal College of Surgeons to 12 candidates:

Lionel Danyers Bailey, Malcolm Barker, Cyril Douglas Day, Herman Falk (Major I.M.S.), Walter Henry Grace, Mervyn John Holmes, Tam Legge, Richard Douglas Passey, M.C., Eva Louise Cairns Roberts, William Leslie Webb, Harold Edward Whittingham, John Pryce Williams.

Appointments to various offices were made on the nomination of the President and Council. The Censors elected were Sir Wilmot P. Herringham, K.C.M.G., C.B., Sir Humphry D. Rolleston, K.C.B., Dr. Raymond H. P. Crawfurd, and Sir John Rose Bradford, K.C.M.G., C.B.

The gift by Lady Allchin of a portrait of the late Sir William Allchin, by Sir Luke Fildes, R.A., was accepted, and the thanks of the College accorded to Lady Allchin.

The Baly medal was awarded to Dr. Leonard Hill, F.R.S. The award is made every alternate year to the person deemed to have most distinguished himself in the science of physiology during the two years immediately preceding the award, which is not restricted to British subjects.

The President announced that the Streatfeild scholarship had been awarded to Dr. F. G. Cawston of Durban, Natal.

Reports from the Conjoint Examining Board of England were received and the recommendations adopted, namely, that the Central Secondary School, Sheffield, the Grammar School, Barnstaple, King's School, Rochester, and the Grammar School, Normanton, be recognized for instruction in chemistry and physics; that the St. Paul's Schools for Girls, West Kensington, and the Municipal College, Grimsby, be recognized for instruction in chemistry, physics, and biology.

It was resolved to recognize the course of instruction in pharmacology and practical pharmacology in the medical department of the University of Cape Town.

The Committee reported that it agreed with the recommendation of the Council of the Royal College of Surgeons to the effect that it was not desirable to institute a special examination in ophthalmology conducted by ophthalmogists. The Committee was of opinion that the present regulation required a sufficient period of special instruction in ophthalmology to enable teachers of ophthalmology in the medical schools and hospitals to hold class examinations, and to introduce such conditions for attendance on the course as they considered desirable before certificates of attendance were granted by them. The Committee therefore recommended that no alteration should be made in the present regulation relating to instruction and examination in ophthalmology.

The Committee also recommended and it was decided that the modification in the examination in practical pharmacy agreed to in 1915 should now be put into force. The medical schools will be notified that an examination in materia medica and pharmacology will be substituted for that in practical pharmacy. Revised regulations with the new synopsis already authorized by the Royal Colleges will be issued.

CONJOINT BOARD IN ENGLAND.

THE diplomas of M.R.C.S., L.R.C.P. have been conferred upon the following seventy-eight candidates who have passed the final examination in medicine, surgery, and midwifery:

W. S. Adams, R. G. Addenbrooke, R. J. Allison, J. C. Andrews, M. Aronsohn, G. A. E. Barnes, C. Bluett, T. G. D. Bonar, *Hilda C. Bowser, *Sarah A. F. Boyd-Mackay, †W. E. Bracey, G. A. A. Bradnack, *Ella M. Britten, *Anna B. Broman, H. M. Brown, Nai Cheua, B. Y. H. Christmas, S. M. Cohen, P. C. Collyns, A. I. Cox, *Ursula B. Cox, E. A. L. Crichlow, I. J. Cruchley, H. E. Cumming, G. L. Cutts, J. C. Davies, H. Dryerre, C. Dunscombe, T. G. Evans, T. Fernandez, *Kathleen Field, F. L. Fonseka, H. M. Gerson, F. J. Good, H. H. Goodman, *Dorothy M. Greig, O. S. Hillman, Aga Mohamed Kazim, H. W. Kerfoot, V. R. Khanolkar, H. J. Levy, D. Livingston, E. S. Longton, Aziz Abd El Sayed Mansour, M. Marcus, A. Marsh, A. Y. Massoudu, *Kathleen H. Matthews, C. Moffatt, V. G. Mohile, F. Moor, F. Morcos, J. E. B. Morton, V. A. Newton, J. G. Nolan, A. G. Ord, E. R. Ormerod, A. A. Osman, *Sigrid L. S. Pearson, G. A. Pennant, G. S. B. Philip, T. H. A. Pinniger, H. Reid, B. R. Reynolds, C. H. St. John, *Olive B. Sharp, G. J. Sophianopoulos, F. G. Spear, *Mary S. Stocks, J. G. Strachan, *Sonia Straschun, S. R. Tattersall, B. M. G. Thomas, D. V. Townsend, A. B. K. Watkins, F. F. Wheeler, A. H. Whyte, *Gladys M. T. Williams.

* Under the Medical Act, 1876.
† Under Regulations dated October 1st, 1884.

The Services.

TERRITORIAL FORCE DINNERS.

LIEUT.-COLONEL D. N. HAMILTON, R.A.M.C.(T.F.R.), honorary secretary of the Territorial Force Medical Officers' Association, informs us that the committee of that association is making arrangements for a dinner in October next for Territorial Force medical officers. Communications should be addressed to Colonel Hamilton at 37, Russell Square, London, W.C.1. We announced some time ago that Lieut.-Colonel A. R. Henchley, D.S.O., R.A.M.C.(T.F.), was forming a committee to arrange for a dinner for Territorial Force medical officers.

LIEUT.-COLONEL J. F. DONYAN, C.B., late R.A.M.C., has been awarded the degree of Doctor of Laws, LL.D., *honoris causa*, by the National University of Ireland, in recognition of his services in the field during the 1914–18 campaign and previous wars.

Obituary.

DANIEL LOVETT HUBBARD, M.B., B.S.,

Bordighera.

DANIEL LOVETT HUBBARD was born in 1861, began his medical education at King's College Hospital in 1880. A hard worker and keen sportsman (he was in the Hospital Rugby football team) he gained the good will of all who knew him. He was one of the house-surgeons to the hospital in 1886. Afterwards he went to the Durham University College of Medicine, and took the degrees M.B. and B.S. in 1887. He started in practice under the late Dr. William Bell of New Brighton, but after his marriage in 1901, with Margaret, the eldest daughter of the late Mr. E. C. Fernihough of Rock Ferry, he went to Lynton, North Devon. A few years later his wife's health compelled him to live out of England, and he settled in Bordighera, where for over twenty years his name has been a household word, and he gained to an unusual degree the complete confidence and deep affection of all his patients.

With the coming of the Italian Expeditionary Force Hubbard threw himself heart and soul into the British Red Cross work, and earned the admiration and regard of all with whom he came in contact. But his health completely broke down under the strain, and his heart became seriously affected. He was brought over to England early

in May, but became gradually weaker, and died quite suddenly on July 23rd. His body was laid to rest at the Hampstead Cemetery on July 26th. The funeral was attended by his immediate relatives and many friends, among whom were Sir David Ferrier, F.R.S., Dr. C. O. Hawthorne, Dr. Bogle, and Mr. Berry, Consul at Bordighera. Whatever Hubbard's hand found to do, he did it with his might. A wise physician and large-hearted friend, he made his profession respected wherever he went. R.I.P.

WYNDHAM RANDALL, L.R.C.P.EDIN., M.R.C.S.,
Bridgend, Glamorgan.

WE regret to announce the death in his 73rd year of Dr. Wyndham Randall, Bridgend, which occurred on July 17th. He was a member of a well known and much esteemed family in South Glamorgan, and was born at Bridgend. He was educated at Cheltenham and St. Bartholomew's Hospital, London. Dr. Randall was the doyen of the profession in the district; he spent nearly the whole of his professional life in his native town, and by his many sterling qualities won the confidence of his colleagues. To within a few years of his death he was medical officer to the Bridgend and Cowbridge Board of Guardians and medical officer of health to the Bridgend Urban District Council and also to the Penybont Rural District Council. The loss of a son—a captain in the R.A.M.C.—in the war was a blow from which he never recovered. It was indeed an irony of fate that Captain Randall should have been killed upon the threshold of a professional career which promised to be of much distinction. Captain Randall had a brilliant scholastic and medical record before he graduated with honours in his finals at the London University. Dr. Randall was deeply interested in all matters appertaining to his profession, a thoughtful and regular reader of current medical literature.

Though he held strong and decided views on many controversial questions, both political and otherwise, views not always accepted by his friends, yet, however much they differed from him, none doubted his sincerity and all loved his companionship. Dr. Randall's written reports to his councils were well prepared, concise and to the point, and gave proof that he was well abreast of modern teaching in all matters appertaining to public health. All that was mortal of Wyndham Randall was laid to rest in St. Bride's Major Churchyard on July 22nd, amid every manifestation of respect and affection. His wife survives him, and for her much sympathy is felt.

CAPTAIN ROBERT CECIL DICKSON, R.A.M.C.(S.R.), died in India, from the effects of an accident, on June 16th. He was the elder and last surviving son of Dr. G. C. Dickson of Carnoustie, and was educated at Edinburgh University, where he graduated M.B. and Ch.B. in 1911. He joined the Special Reserve of the R.A.M.C. as a lieutenant on August 5th, 1914, on the first day of the war, and was promoted to captain on April 1st, 1915.

Medical News.

THE Potassium Compounds Order and the Glass Control Orders have been suspended.

DR. WILLIAM EWART BULLOCK of Hendon has by deed poll changed his name to William Ewart Gye.

SIR JAMES MACKENZIE DAVIDSON left £23,783 net personalty.

A FRENCH national congress of natality and population will be held at Nancy in September (25th to 28th) under the presidency of M. Auguste Isaac.

THE Old Students' Dinner of the London Hospital will be held on Thursday, October 2nd, at Princes' Restaurant. Sir Bertrand Dawson, G.C.V.O., C.B., will preside. This will be the first reunion of old students since the outbreak of the war. Application for tickets should be made to one of the honorary secretaries, Mr. Hunter Tod, 11, Upper Wimpole Street, W.1, or Dr. Charles H. Miller, 32, Devonshire Place, W.1.

A WAR Section of the Royal Society of Medicine has been formed for dealing with questions affecting medicine and surgery in the Navy, the Army, and the Air Force. The first meeting will be held on November 10th, when the president, Sir Robert Hill, K.C.M.G., C.B., Medical Director-General R.N., will deliver an address. Among the officers of the Section are representatives of the navy, the army, and the air force, India, the naval and military auxiliary services, and of Canada, Australia, New Zealand, South Africa, and the Colonial Office. Further information can be obtained on application to the Secretary of the Royal Society of Medicine, 1, Wimpole Street, W.1.

DR. JAMES TAYLOR has been gazetted deputy lieutenant for Banffshire. Dr. Taylor was elected provost of Keith in November, 1913, and still holds that office. He has been hononary sheriff substitute for Banffshire since last January. He holds a commission as Major R.A.M.C.(T.), and received the Territorial Decoration in September, 1915.

THE twenty-eighth congress of the French Surgical Association will open in Paris on October 6th under the presidency of Dr. Ch. Walther, surgeon to the Pitié. The questions proposed for discussion are: Closed traumatic lesions of the wrist; treatment of cancer of the tongue by cutting operation; paranephric tumours. Further information may be obtained from the general secretary, Dr. J. L. Faure, 10, rue de la Seine, Paris (6e).

THE Board of Education has issued to local authorities draft regulations for the training of health visitors. Two types of courses are to be recognized—the one, a full course of two years' duration, intended for ordinary students, and a shorter course of one year's duration for trained nurses and other persons already possessing substantial knowledge or experience. It is stated that if a health visitor is to undertake duties connected with midwifery she should be required to obtain the certificate of the Central Midwives Board. The courses are to be given at recognized institutions and the student must pass the examination at the completion of the course. As a rule, courses will be recognized only if they are conducted by, or in close association with, a university institution. The general policy desired by the Ministry of Health is that practically only those women should be appointed to salaried posts as health visitors who possess a good general education, followed by a course of special training, as above outlined.

Letters, Notes, and Answers.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

The postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand, London;* telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London;* telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra, Westrand, London;* telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

RECURRENT HERPES.

L. H. would be glad to hear of the probable cause and suggestions for a treatment of a case of herpes in a healthy young woman of 30, occurring on the right cheek on an average every four or five weeks during the past ten or twelve years.

LETTERS, NOTES, ETC.

MERCANTILE MARINE MEDAL.

THE Board of Trade makes the following announcement (August 4th, 1919):

With reference to the award by His Majesty the King of the British War Medal and the Mercantine Marine War Medal to members of the Mercantile Marine, and to crews of Pilotage and Lighthouse Authorities' vessels, the President of the Board of Trade desires to make the following further announcement:

(*a*) All applications should be made on the forms which are provided at Board of Trade Mercantile Marine Offices, at the Offices of Associations and Unions of officers and men of the Mercantile Marine, and at the Offices of Pilotage and Lighthouse Authorities. If, however, an applicant is unable to attend at any such office, a written request may be sent to the Marine Department, Board of Trade, London, for an application form. Applications may be made on and after August 5th.

(*b*) Officers, men and women, who have served during part of the war in the Royal Navy, R.N.R., or under special Naval

Engagements (that is, Form T 124 and its variants), in the Army, or in the Royal Air Force, have in many cases performed service during some other part of the War which would entitle them to the Mercantile Marine War Medal. Such officers, men and women, will be awarded the Mercantile Marine War Medal if their claims are approved, apart from any further medal which they may be awarded under the regulations of the Admiralty, War Office, or Air Ministry.

(*c*) Qualifying service will in all cases be service at sea, and not service in harbours, rivers, or other inland waters.

(*d*) Legatees or next-of-kin of deceased officers, men and women, will not be entitled to participate in the preliminary distribution of medal ribands, but must await the distribution of the medals, to which the usual quantity of riband will be attached.

(*e*) The preliminary issue to any applicant of medal riband cannot by itself entitle the applicant to the subsequent award of the corresponding medal.

Hospital Ships.

DR. G. H. JONES (Deddington, Oxon) writes: I write to voice the prevalent feeling amongst the members of the hospital ship service that the Government should bestow the Mercantile Marine medal on the staff sisters and personnel serving on hospital boats during the war. When it is pointed out that out of something like fifty hospital ships more than twelve were either mined or torpedoed, with a correspondingly heavy toll of life among medical officers, sisters, and other ranks, the claims of this branch of the service to the medal are great.

After all, although not for a moment depreciating the wonderful part played by the Mercantile Marine, they were nearly all armed, and so could offer some sort of defence. Not so the hospital boats, which were dispatched sans guns, sans escort. They were flung forth to the tender mercies of the Hun, with the results we know.

Throughout the war the hospital ship service has received scant acknowledgement, the services of six men only being recognized, and the bestowal of the medal would tend to relieve the feelings of neglect and indifference at present existent. If ex-hospital ship medical officers would approach their respective members the matter would be ventilated in the House, and I feel sure, as the justice of the claim is so apparent, that a tardy recognition of their hazardous services would be secured. It is a matter the medical members of the House might fittingly adopt.

WAR MEDALS AND HOME SERVICE.

"OVERSEAS, R.A.M.C.," writes: In support of "A. M.'s" letter, allow me to state that, in addition to the medical officers in the Eastern Command, there are men of other branches of the service who will consider it a gross injustice if not granted a war medal. One would think that no gun was fired at an enemy or that no men were killed and wounded in the command.

ENDEMIC GOITRE AND POLLUTED WATER.

DR. THOMAS FENTEM (Bakewell) writes: In reply to Captain Oliver Latham, may I say that after graduation in 1892 I made the subject of endemic goitre the subject of investigation? I embodied the results of that investigation, and my view as to the etiology of this disease, in a thesis I presented for the degree of M.D. in the University of Edinburgh in 1896, twenty-three years ago. Those views are very similar to the ones expressed by Major McCarrison in his book on the subject. I lay no claim to priority, for probably some investigator at an even more remote date had come to similar conclusions. One of my old Edinburgh teachers often reminded us that "there is nothing new under the sun." Here is an example of the truth of that.

OLD AND NEW R.A.M.C. CONTRACTS: NET EMOLUMENT.

THE following calculations have been made in the attempt to show the net effect, when the effect of assessment of income tax is taken into account, of the remuneration under the new contract offered to volunteers as compared with the earlier contract, based on pay of 24s. a day. The war bonus, sometimes called the Army of Occupation bonus, but of much wider application, has been omitted from the calculations, inasmuch as it will in any case come to an end at the date officially declared to be the termination of the war.

Comparison of Net Emoluments after Payment of Income Tax.

I. *Old Contract.*—£438 *plus* £60 gratuity.

Income tax liability:	£	s.	d.
Assessable pay	438	0	0
Deduct—			
Wife allowance ... ... £50[1]			
Uniform allowance £25			
Life assurance allowance £25			
Abatement ... ... £100—200	0	0	
Net assessable pay	238	0	0
Duty at 1s. 3d. in the £=£14 17s. 6d.			
Net total emoluments £438+£60−£14 17s. 6d.=483	2	6	

II. *New Contract.*—£550 inclusive.

	£	s.	d.
Assessable pay	550	0	0
Deduct allowance as above	200	0	0
New assessable pay	350	0	0
Duty at 1s. 9d.[2] in the £=£30 12s. 6d.			
Net total emoluments £550−£30 12s. 6d.=519	7	6	
Net increase under new contract is therefore—			
£519 7s. 6d.−£483 2s. 6d. ... ... that is	36	5	0

If the officer or his wife were possessed of private income, to the extent of say £100, the income tax payable under the old contract conditions must be calculated at the rate of 1s. 9d. and would amount to £338[3] at 1s. 9d.=£29 11s. 6d., in which case the comparison between the two contracts would be:

	£	s.	d.
Old contract, £498—£29 11s. 6d.	468	8	6
New contract, £550—1s. 9d. in the £ on £450 ...	510	12	6
Increase	42	4	0

NOTES.—[1] The wife allowance for last year was £25, but the new allowance of £50 for 1919–20 has been taken for purposes of comparison. The life assurance allowance is, of course, purely an arbitrary figure, intended to represent the normal case. [2] The rate rises from 1s. 3d. to 1s. 9d. when the total income rises over the £500 limit. [3] On the assumed facts the abatement of £100 would be set against the private income.

ALCOHOL AND VENEREAL DISEASE.

"PERPLEXED" writes: Dr. Home in his letter on the above subject (August 2nd, p. 154) omits to state that during the past forty years there has been a great increase of temperance and that the medical profession have found an increase of venereal disease during the same period. In war time there were further restrictions on drink and a still further increase of disease. Why has increased temperance been accompanied by increased venereal disease both in peace and war?

MOSQUITOS AND SANDFLIES.

THE existence of the disease commonly called "sandfly fever," and the suggestion that it may have something to do with hyperpyrexial sunstroke, may justify the reproduction from the *Pioneer* of the following verses, even were their intrinsic merits not considered to be sufficient:

The 'skeeter's 'arf a gentleman;
'is 'eart is mostly white;
'is way is surface-fightin'
And 'e mainly moves in sight;
'e's regulation methods for
Attacks at night and dawn;
Through long monsoons 'is big platoons
March to a Klaxen 'orn.

The Sandfly, 'e's a gas attack;
'e don't stand up to fight;
'e's slim and 'e's elusive,
And 'e snipes your camp at night;
'e submarines below the sheets,
'e's burstin' full o' wits;
'e's a Frontier Pathan's guile and a black Marsh Arab's style,
But 'e chiefly learned 'is dirty tricks off Fritz.

SARHADDI.

A CORRECTION.

IN Dr. Arthur Mills's letter on sudden death under an anaesthetic (BRITISH MEDICAL JOURNAL, August 2nd, page 152, column 1, line 15 from foot), for "but its toxicity is liable to produce spasm," read "but its toxicity, its liability to produce spasm."

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 32, 35, 36, 37, 38, 39, and 40 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 33, 34, and 35.

THE following appointment of certifying factory surgeon at Thorne (Yorks, West Riding) is vacant.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Seven lines and under	0	6	0
Each additional line	0	0	9
Whole single column	4	0	0
Whole page	12	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.